Holocene relative sea-level changes in Cleveland Bay, north Queensland, Australia

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Volume Two:
Figures, Plates and Supplementary Tables

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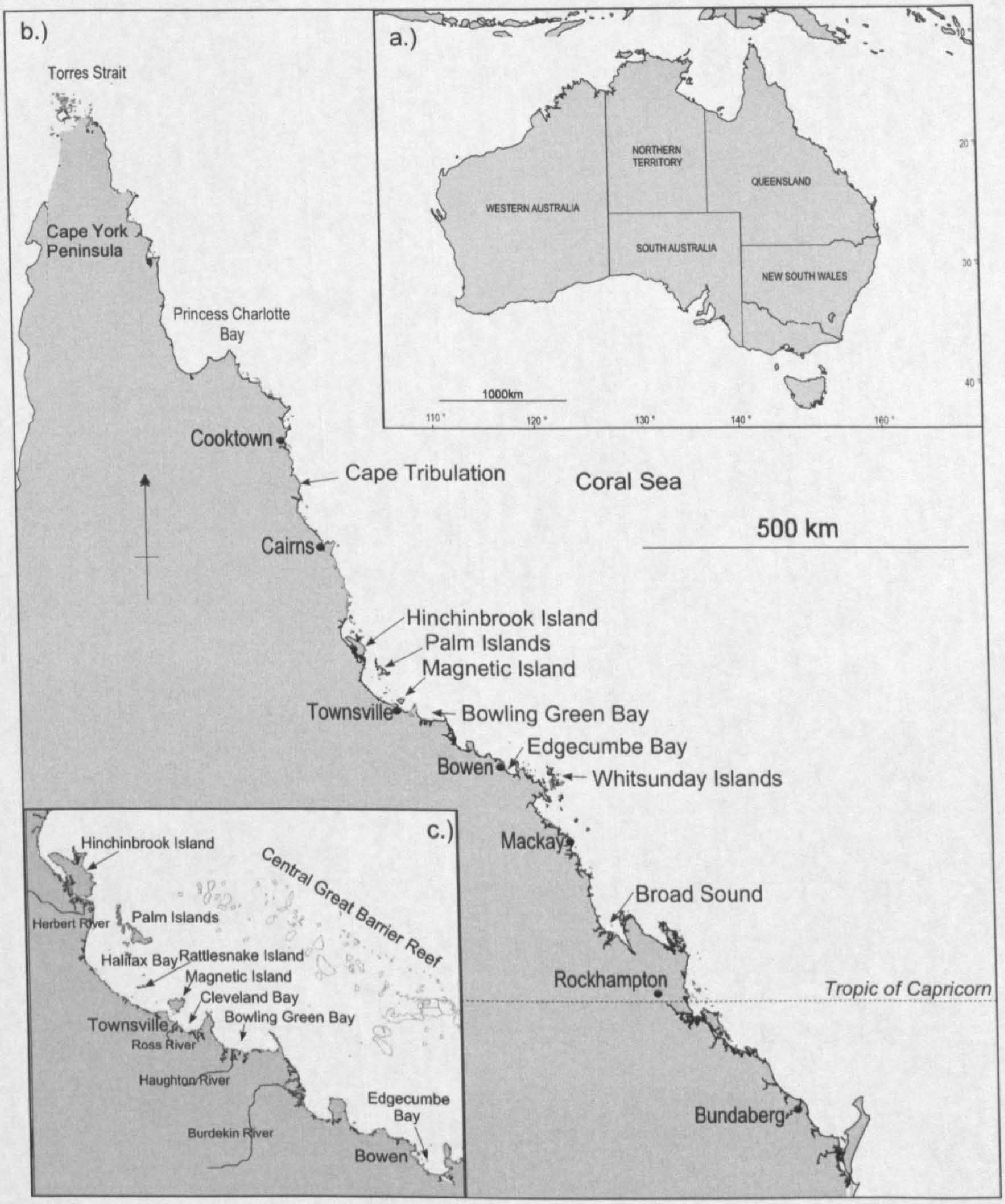


Figure 1.1 Maps of a.) Australian continent, b.) Queensland coastline from Cape York to Bundaberg and c.) north Queensland coastline around Townsville. Locations referred to in the text are marked.

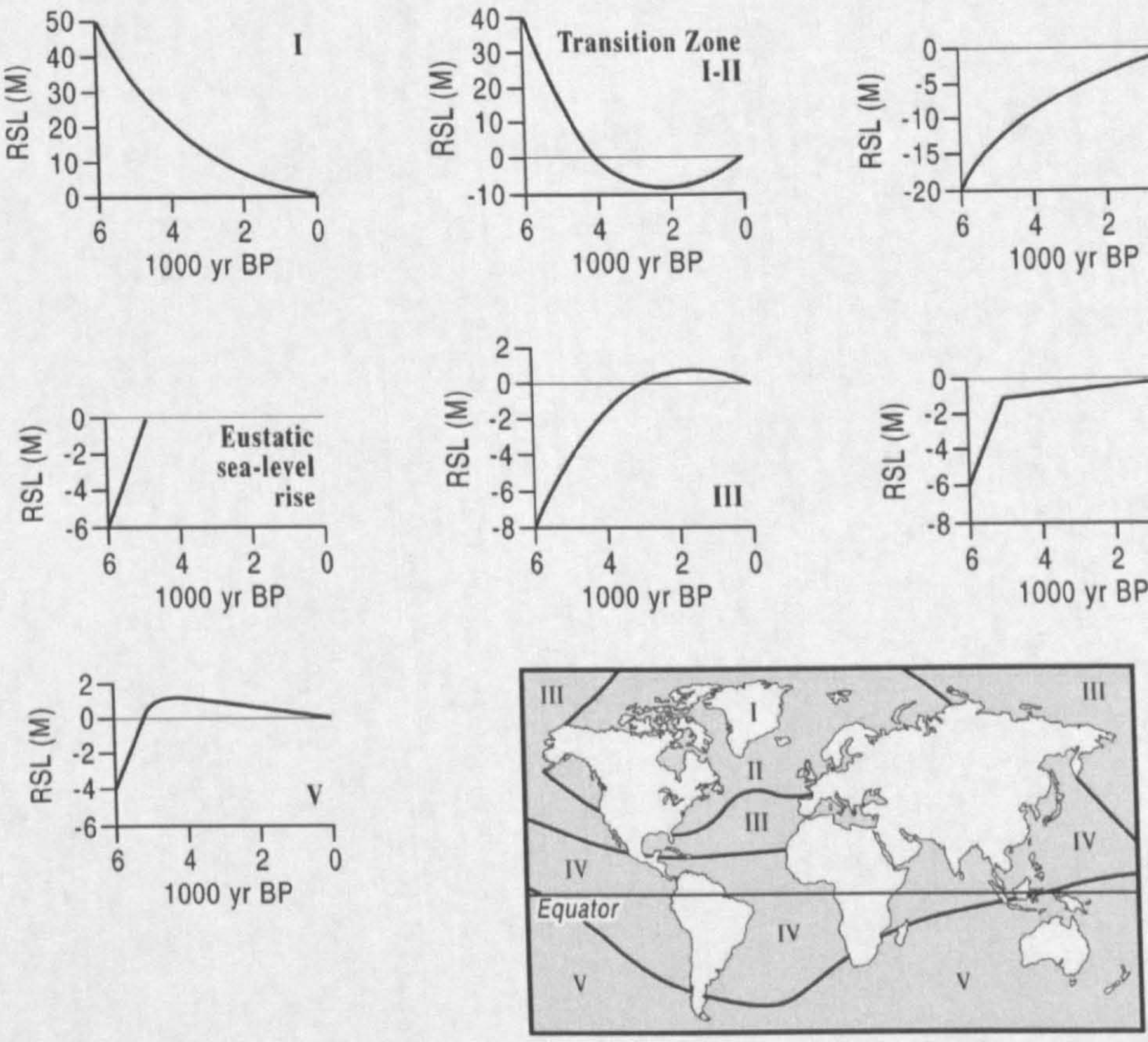
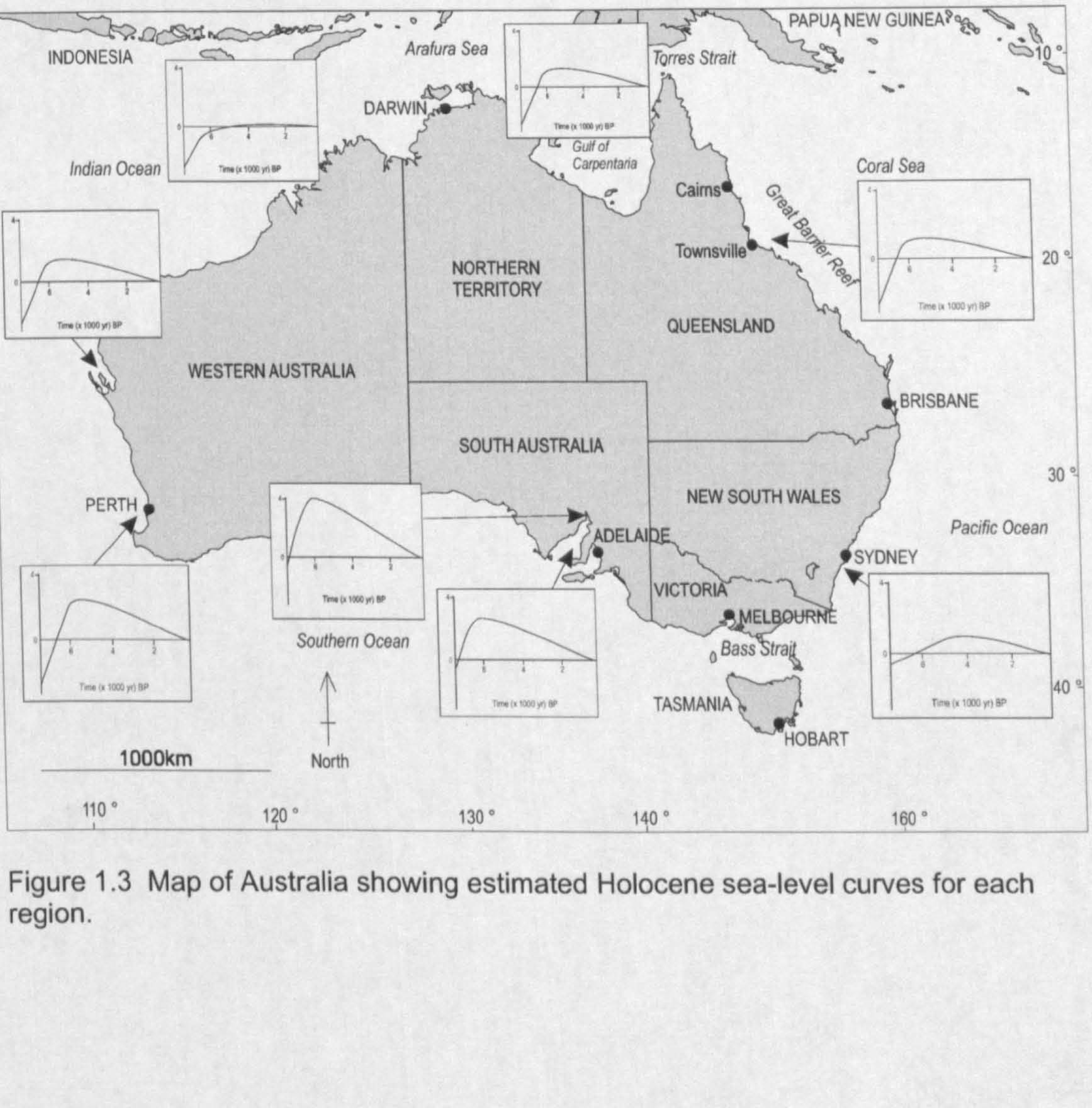


Figure 1.2 Sea-level zones and typical relative sea-level curves deduced for each zone by Clark *et al.* (1978) under the assumption that no eustatic change has occurred since 5 ka BP.



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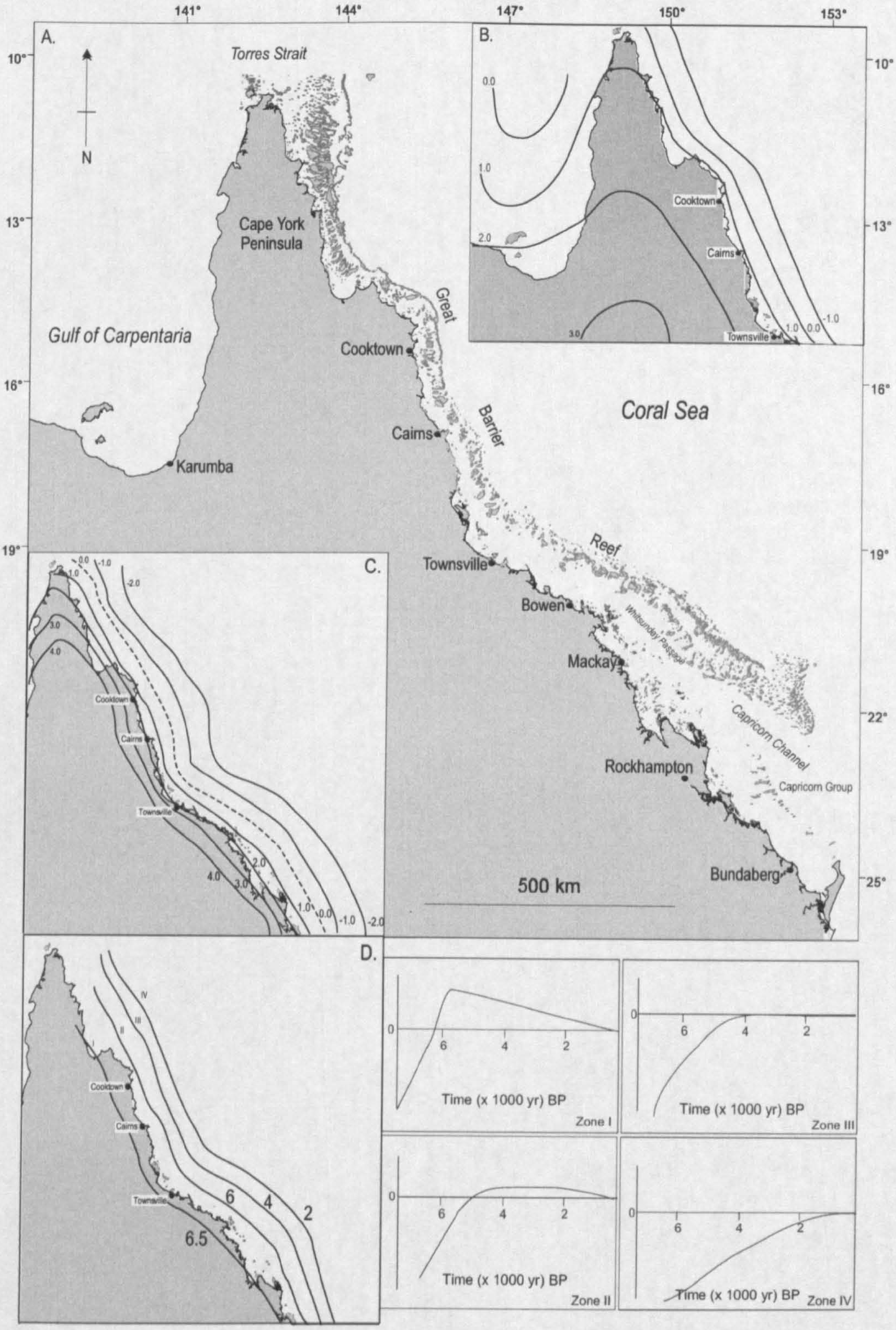

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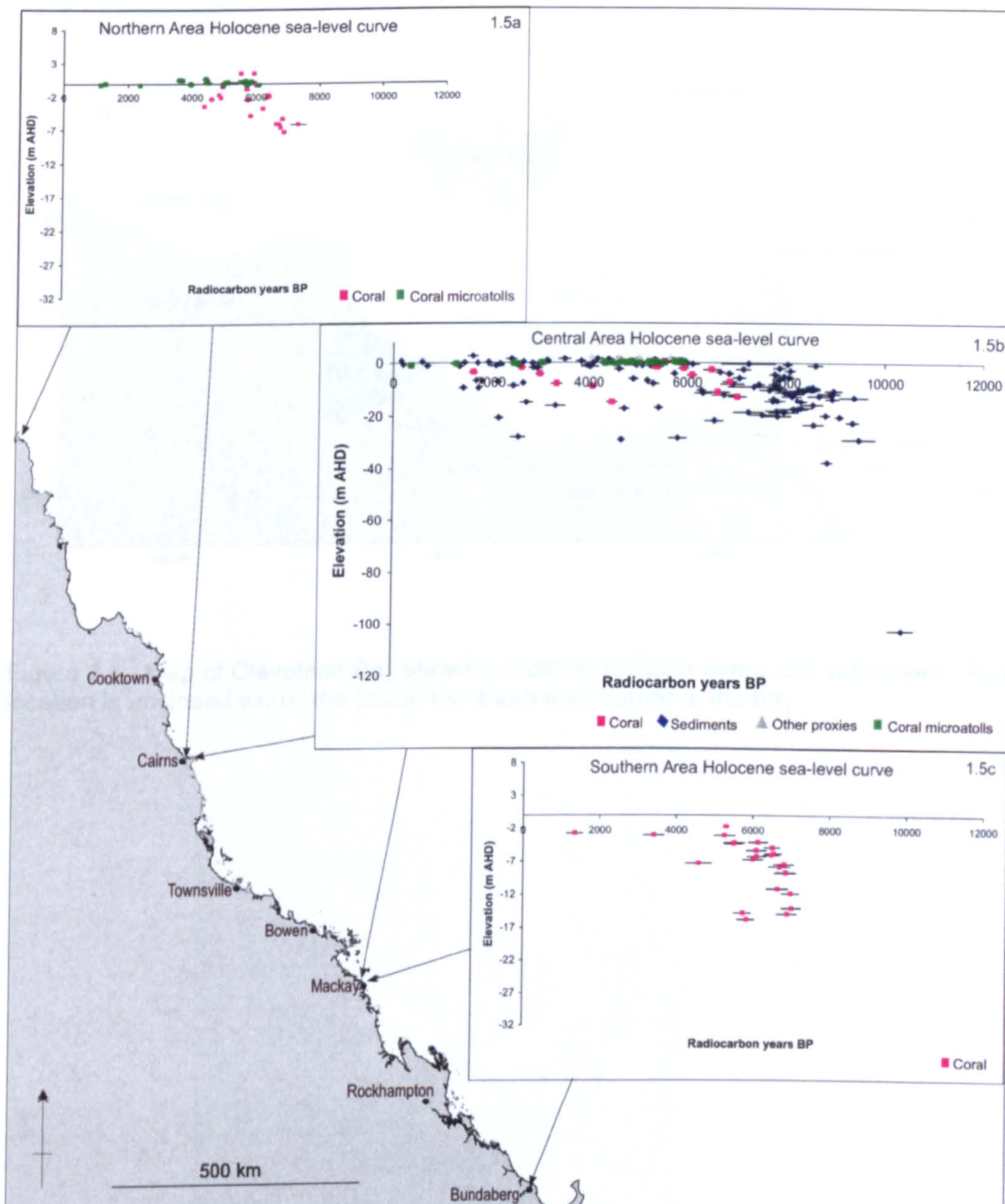


Figure 1.5 Holocene sea-level index points from 3 regions of northern Queensland. (a.) Northern area from Torres Strait to Cairns, (b.) Central area from Cairns to Mackay, (c.) Southern area from Mackay to Bundaberg. Sea-level indicators are coral cores (pink), coral microatolls (green), sedimentary deposits (blue) and other indicators (grey) including encrusting oysters and barnacles. All ages are radiocarbon years BP. Horizontal error bars indicate radiocarbon age errors. There are no vertical error terms assigned to any indicators.

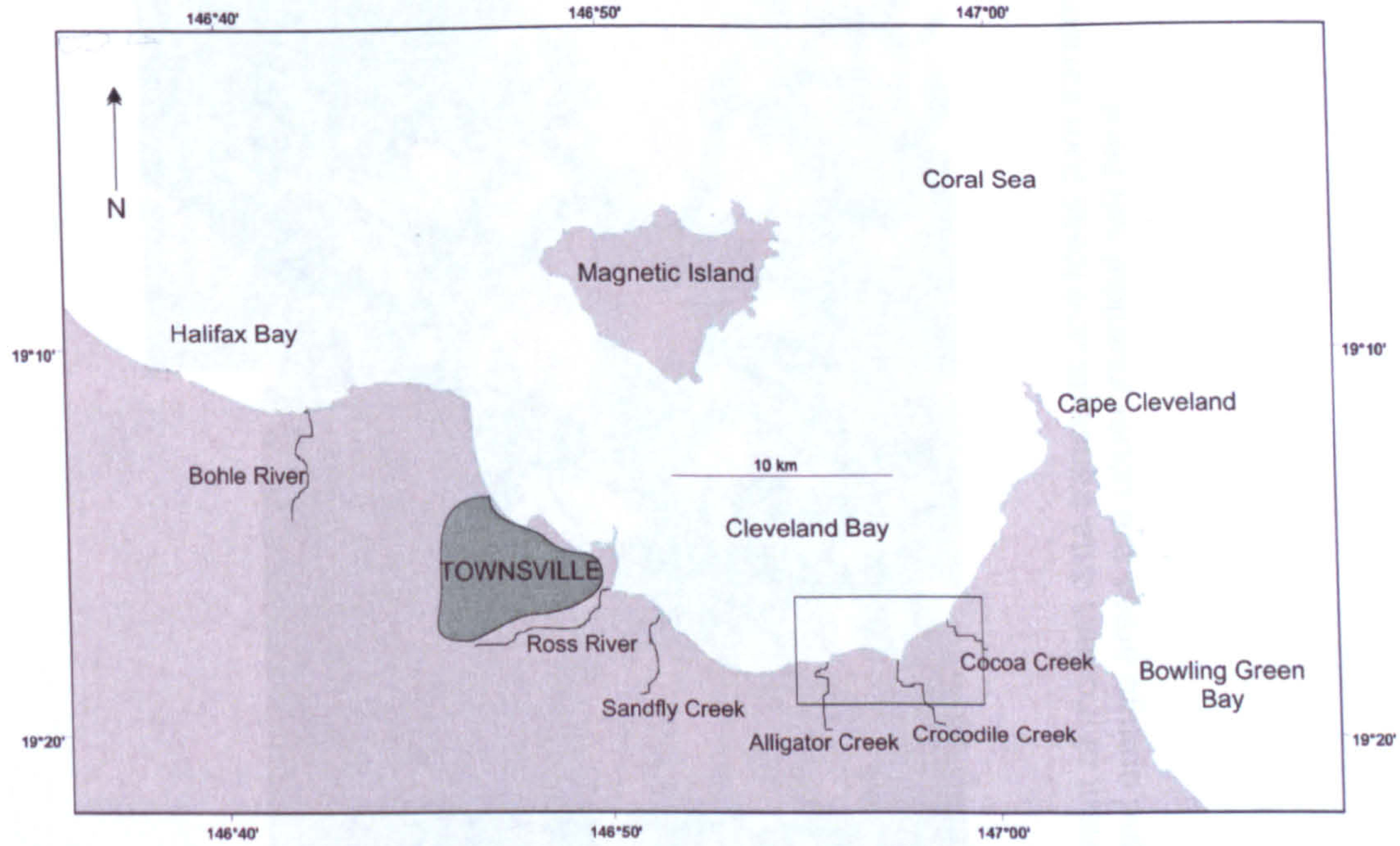


Figure 2.1: Map of Cleveland Bay showing location of major rivers and settlement. Field location is enclosed within the box in the south east corner of the bay.

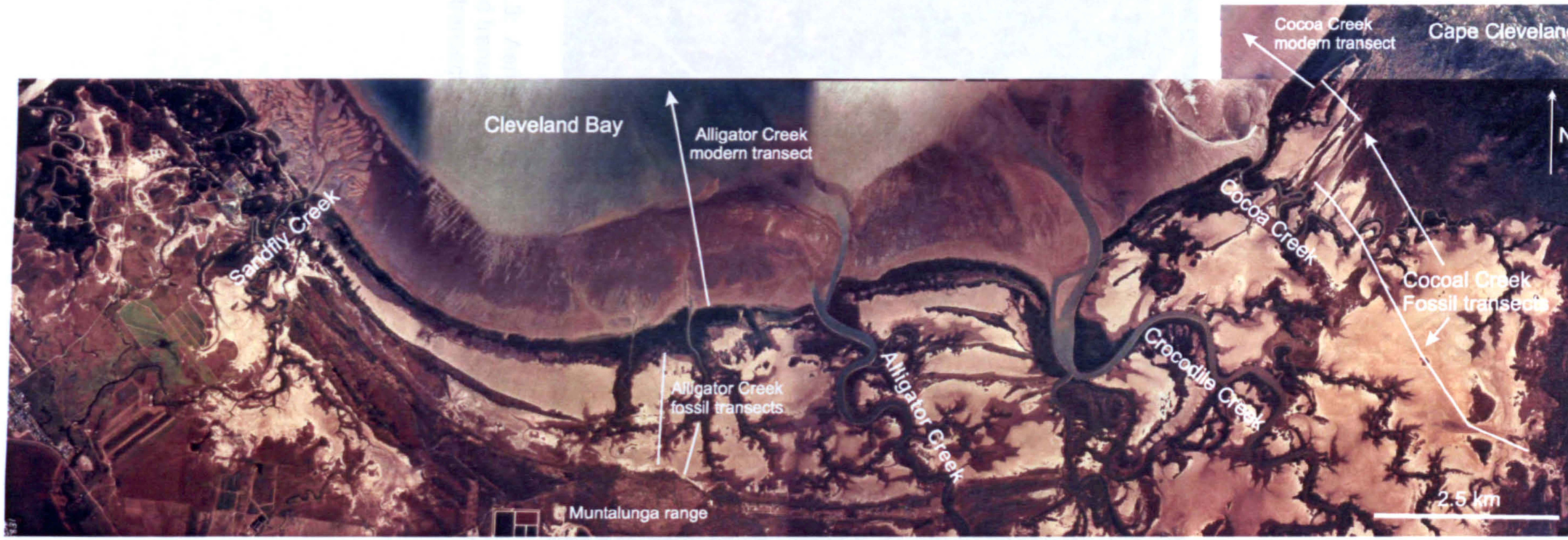


Figure 2.2: Aerial photographs of field locations in Cleveland Bay, including placement of modern data transects and fossil core transects. Dark green areas fringing the coastline and creeks are mangrove forests, yellow and orange areas are upper intertidal salt pans.

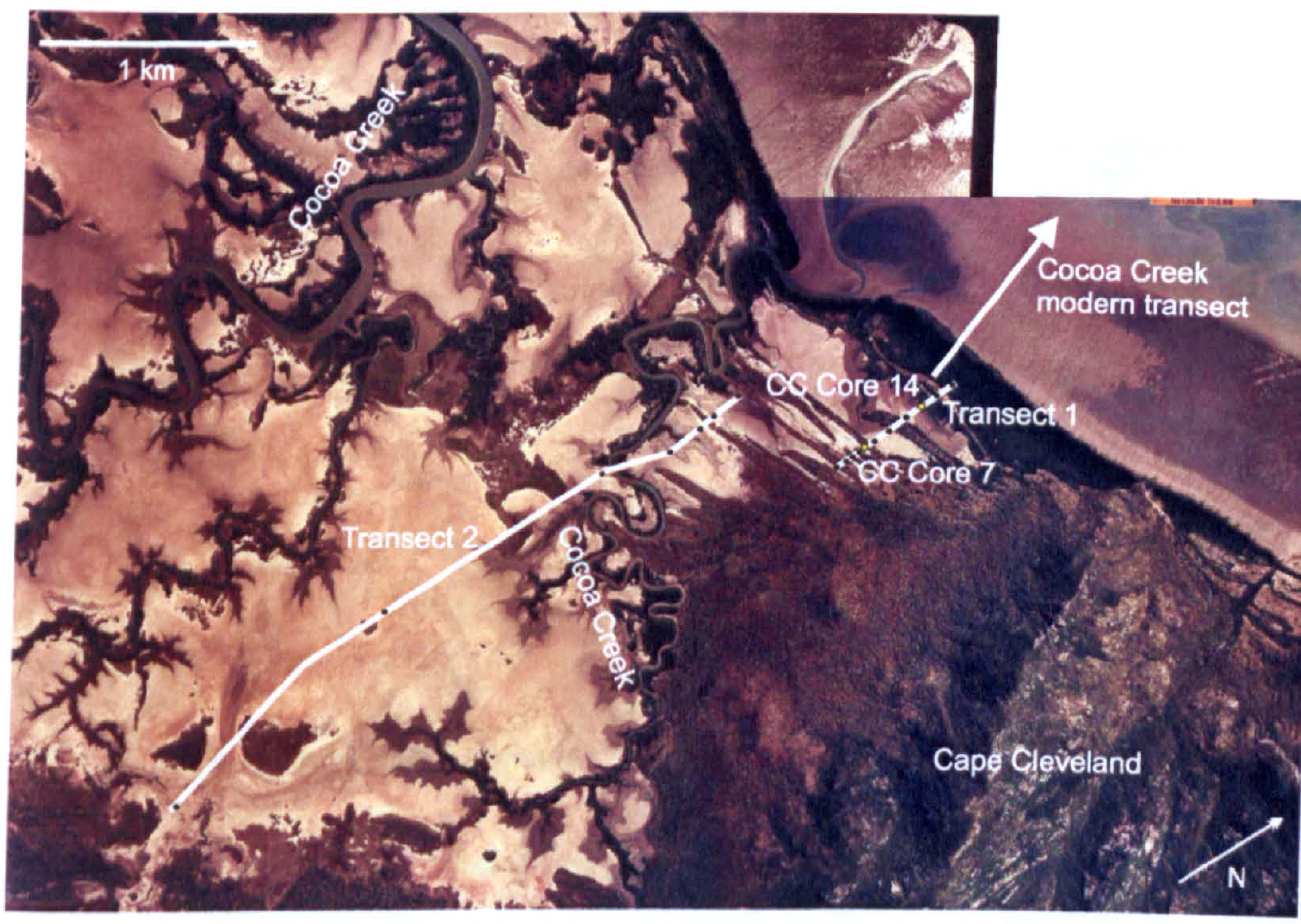
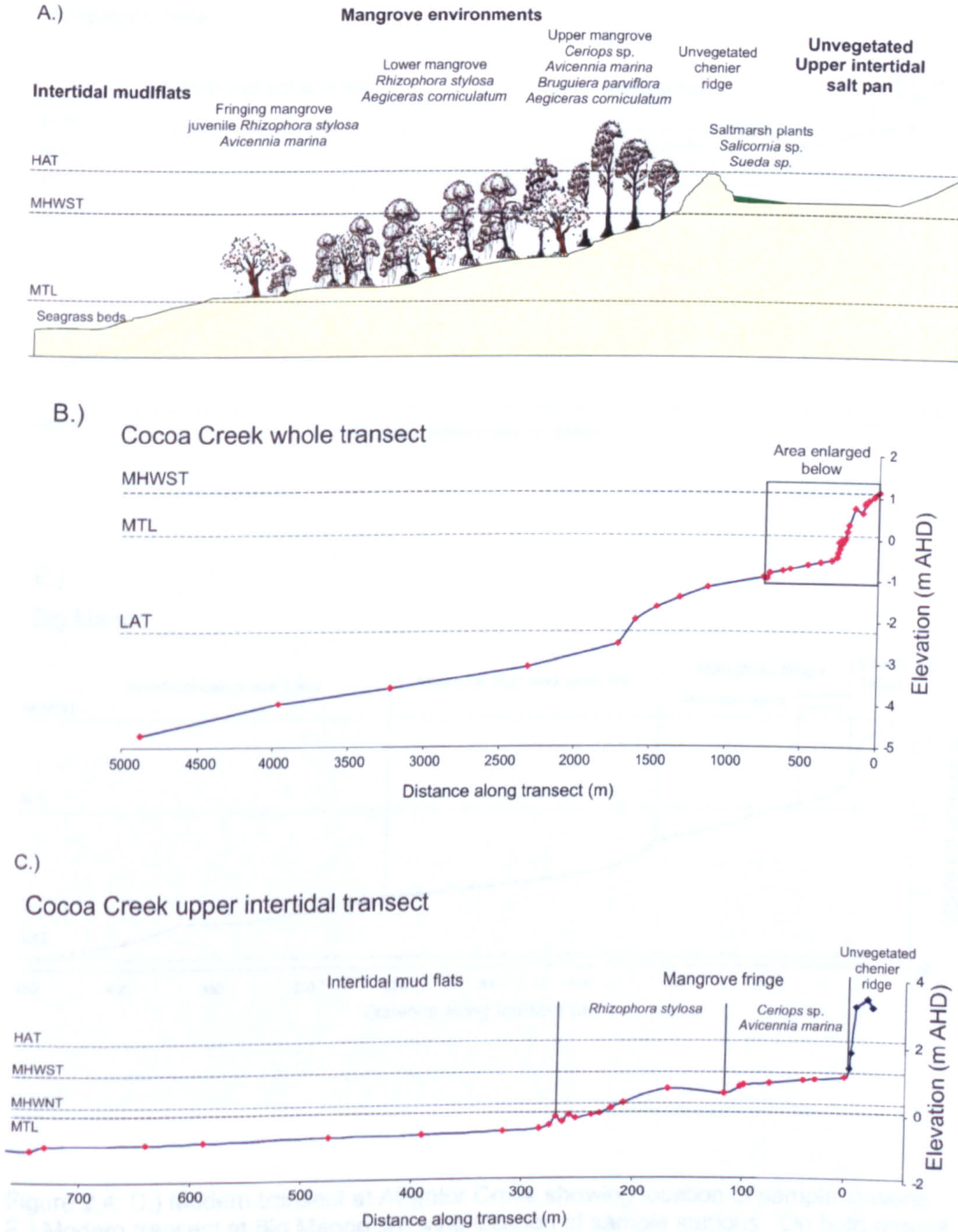


Figure 2.3: Aerial photograph of modern and fossil field site near Cocoa Creek showing two cored transects close to Cape Cleveland and the modern mangrove, intertidal and subtidal transect.



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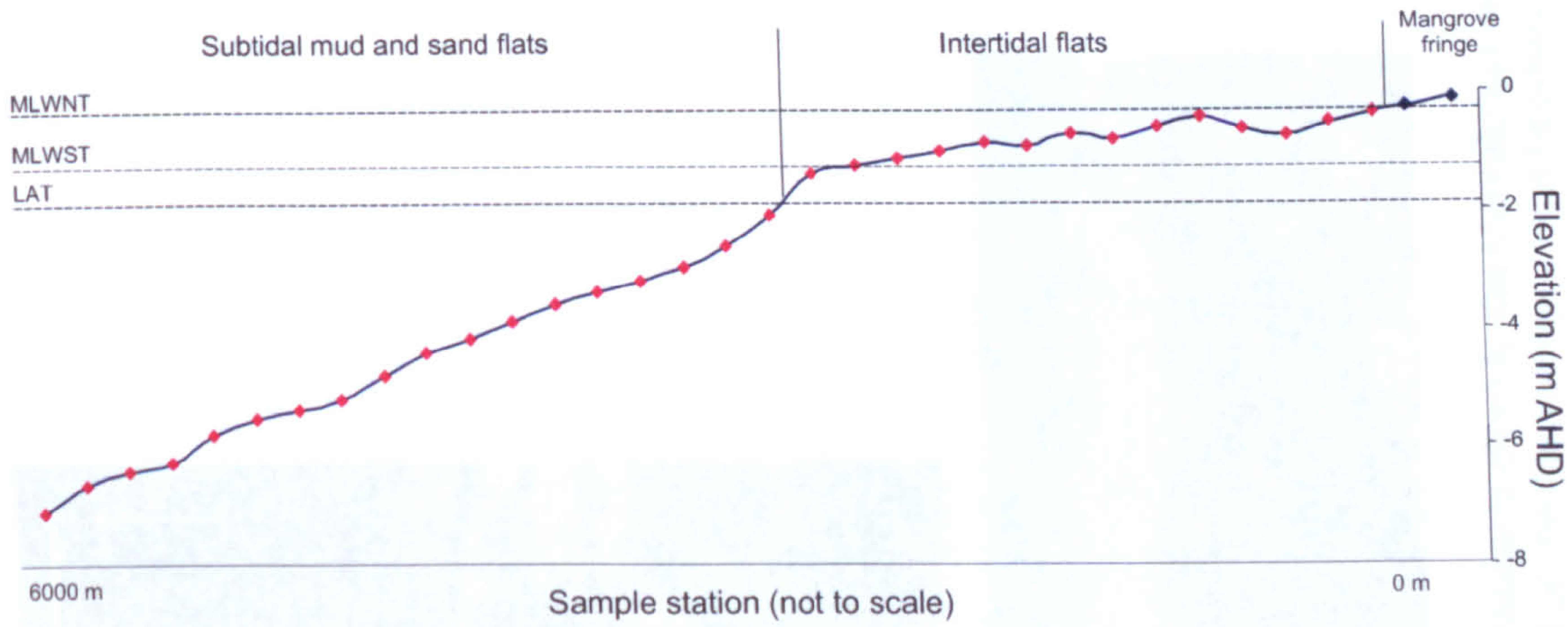
D.)

Alligator Creek



E.)

Big Mango

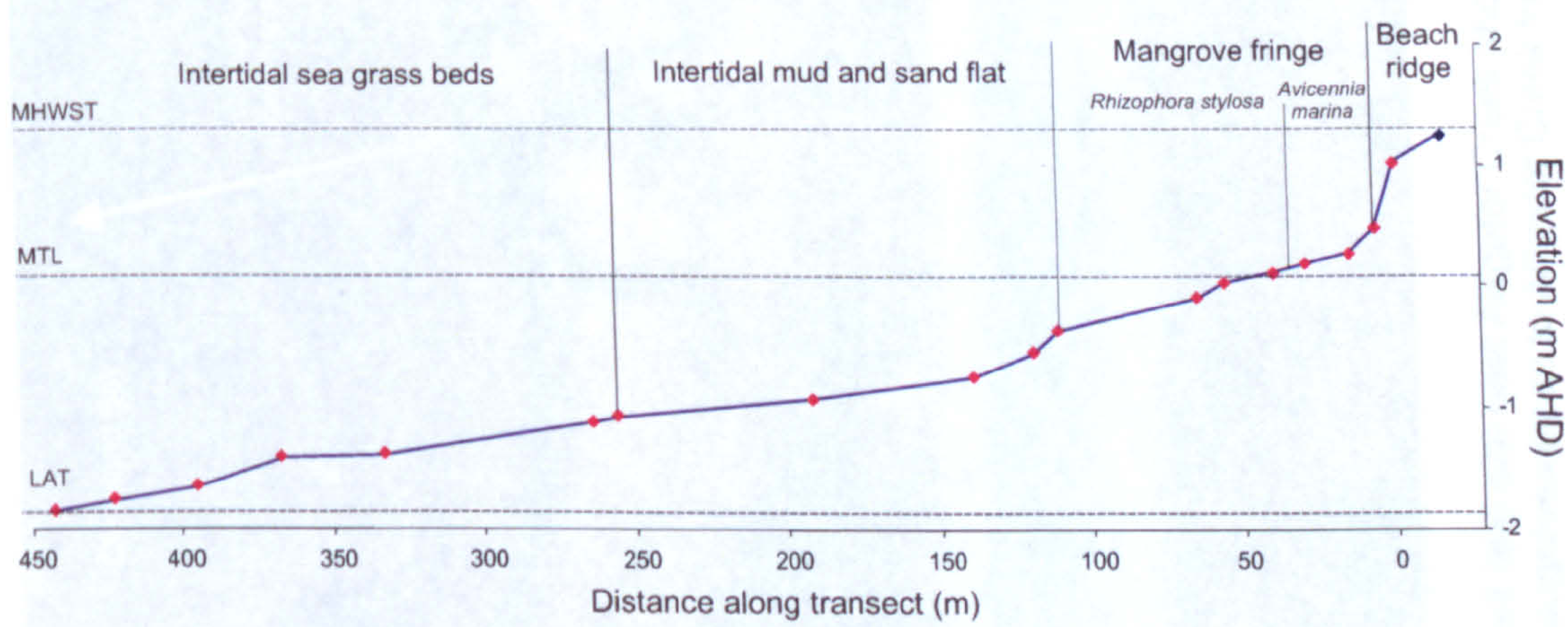
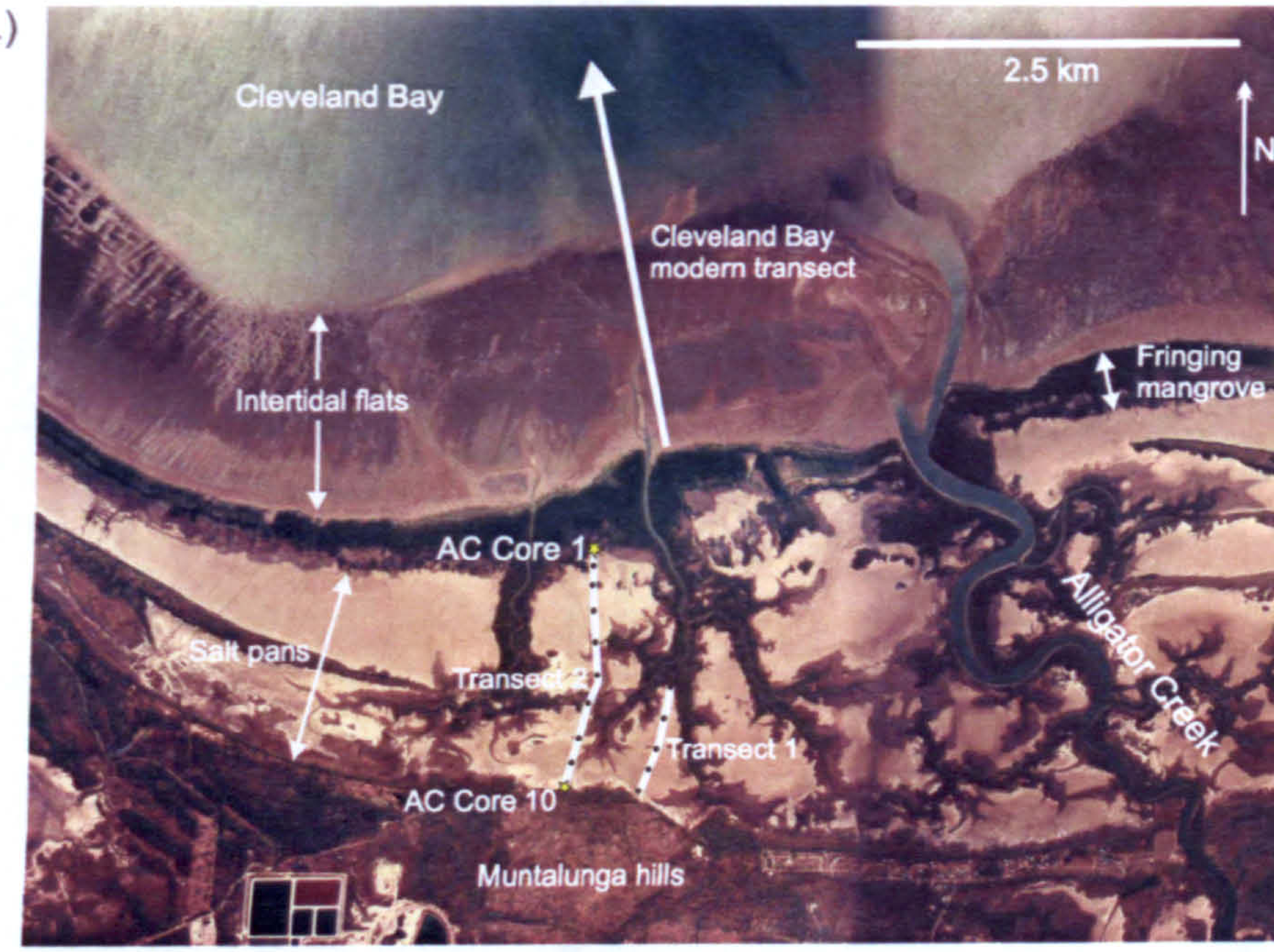


Figure 2.4: D.) Modern transect at Alligator Creek showing location of sample stations. E.) Modern transect at Big Mango showing location of sample stations. On both graphs sampled locations are in red, other levelled heights are in blue.

A.)



B.)

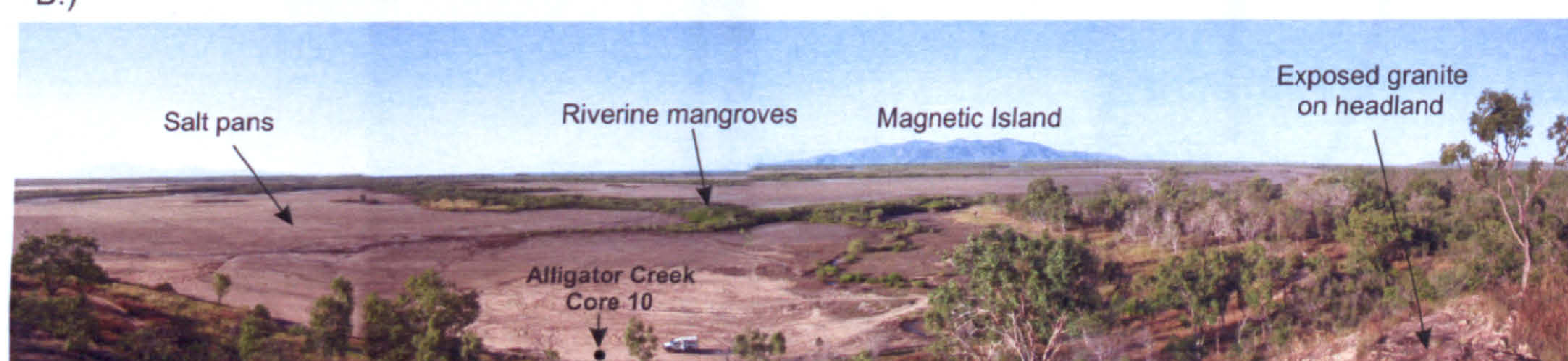


Figure 2.5 a.) Aerial photograph of fossil field site near Alligator Creek showing two cored transects close to the Muntalunga range headland. b.) View of salt pans and mangroves close to Alligator Creek from higher ground on the Muntalunga range headland.

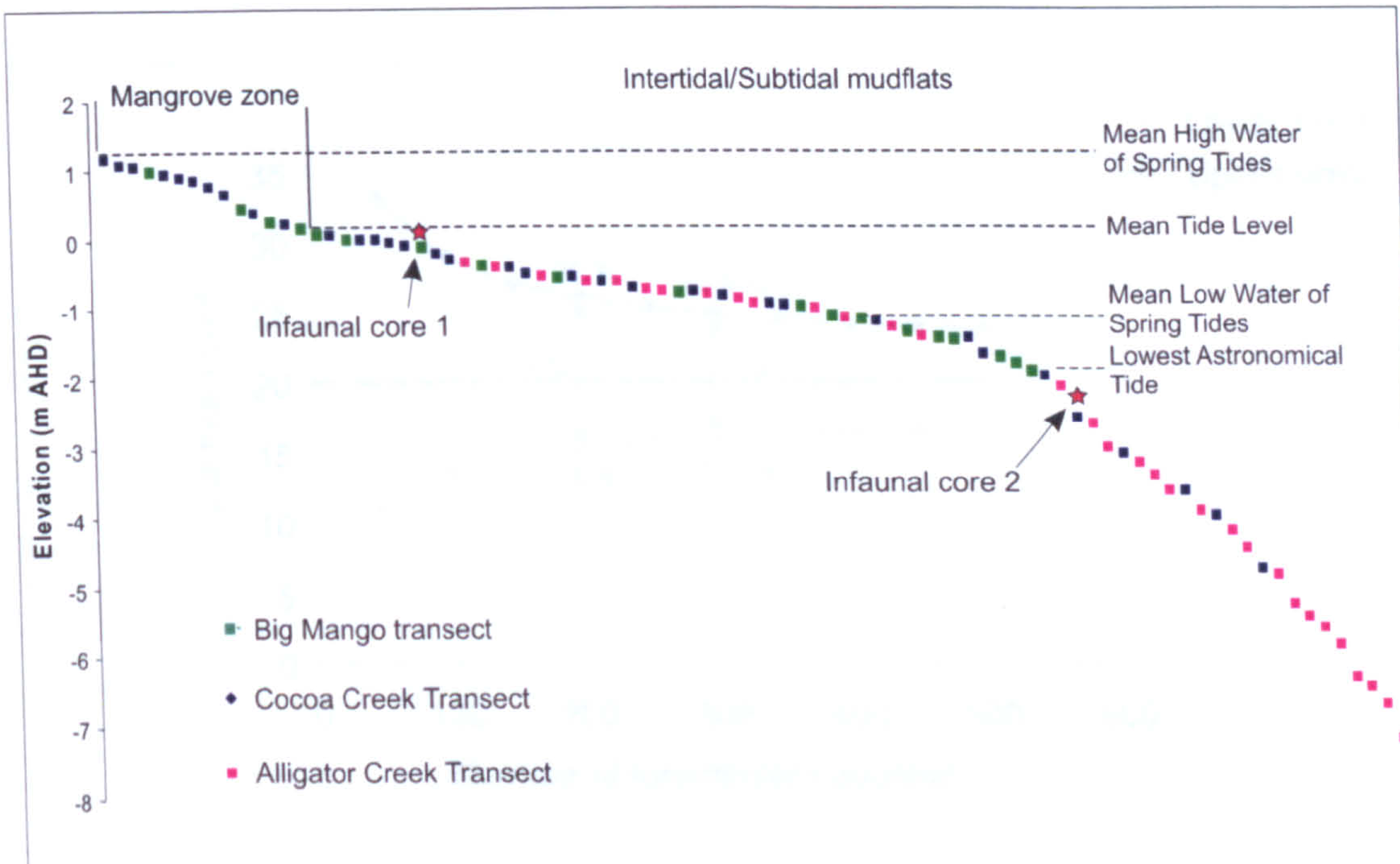


Figure 3.1: Elevation range of modern sediment sample transects in Cleveland Bay and Edgecumbe Bay including the location of short (50 cm) cores (starred) for taphonomic analysis.

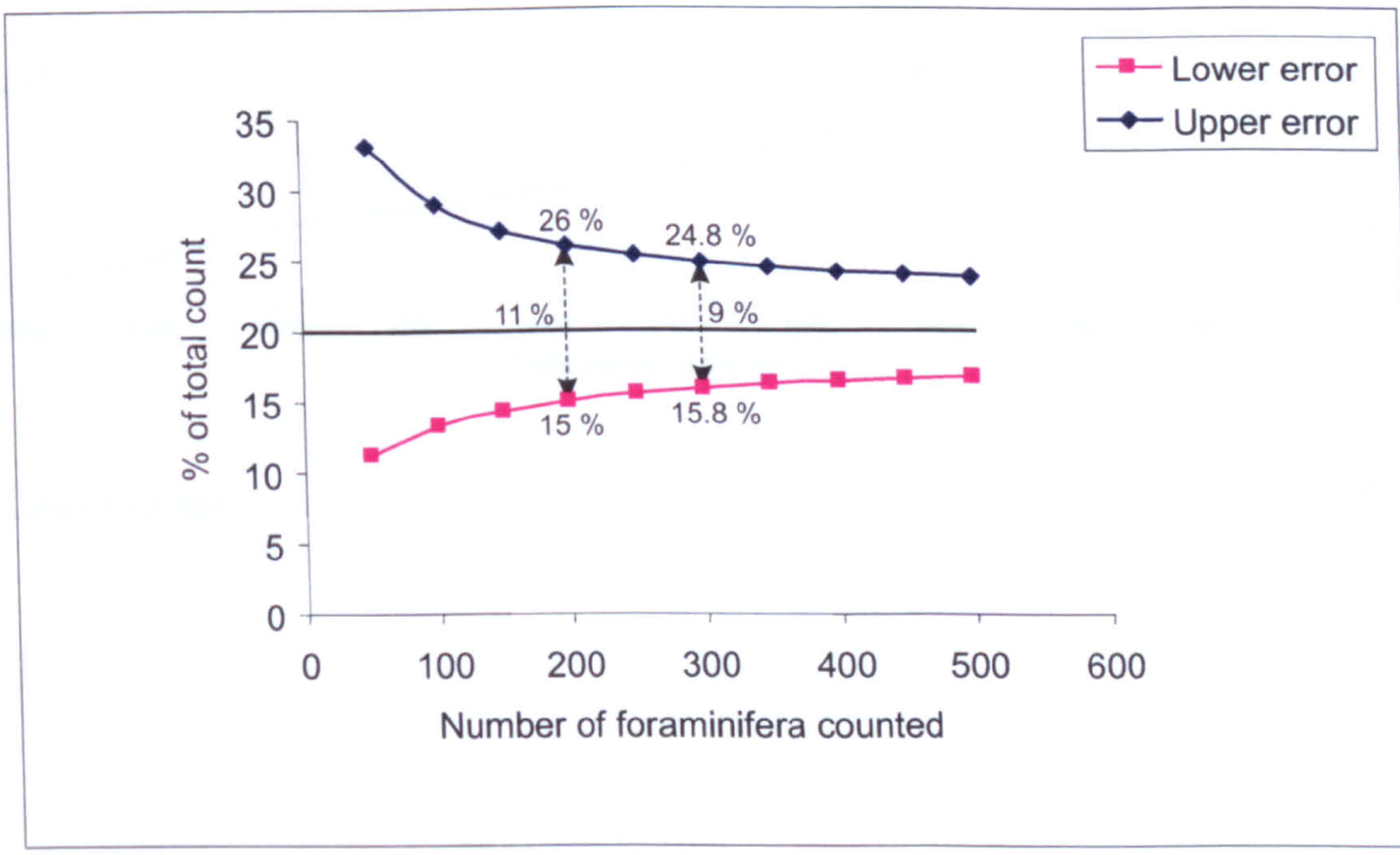


Figure 3.2: Changes in 95% confidence interval of foraminiferal counting error if a species represents 20% or the total count at each level (after Mosimann, 1965).

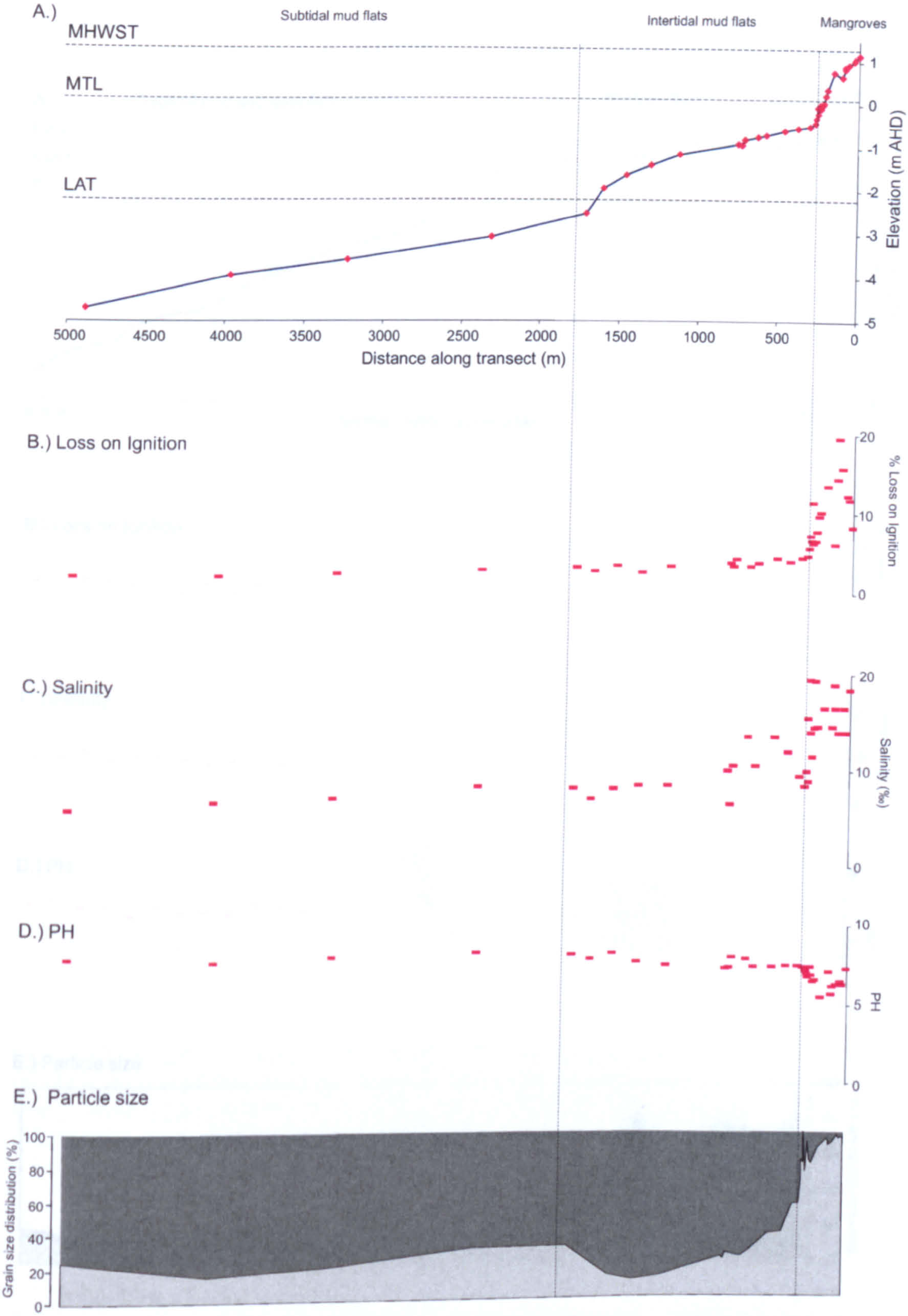


Figure 4.1: Graphs showing a.) elevation, b.) loss on Ignition, c.) salinity, d.) pH and e.) grain size distributions across the modern transect at Cocoa Creek (light grey - silt, dark grey - clay).

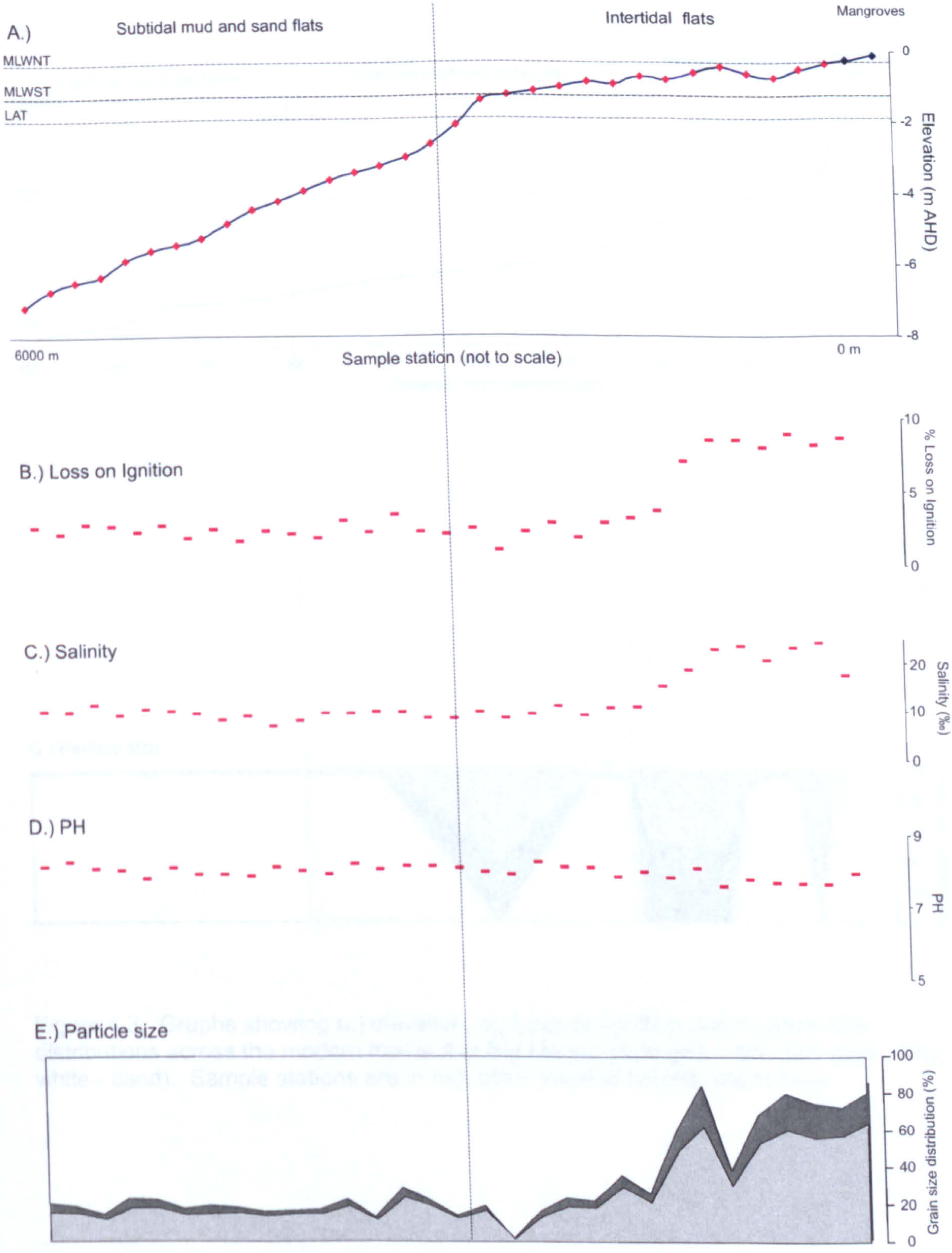


Figure 4.2: Graphs showing a.) elevation, b.) loss on Ignition, c.) salinity, d.) pH and e.) grain size distributions across the modern transect at Alligator Creek (light grey - silt, dark grey - clay, white - sand). Sample stations are in red, other levelled heights are in blue.

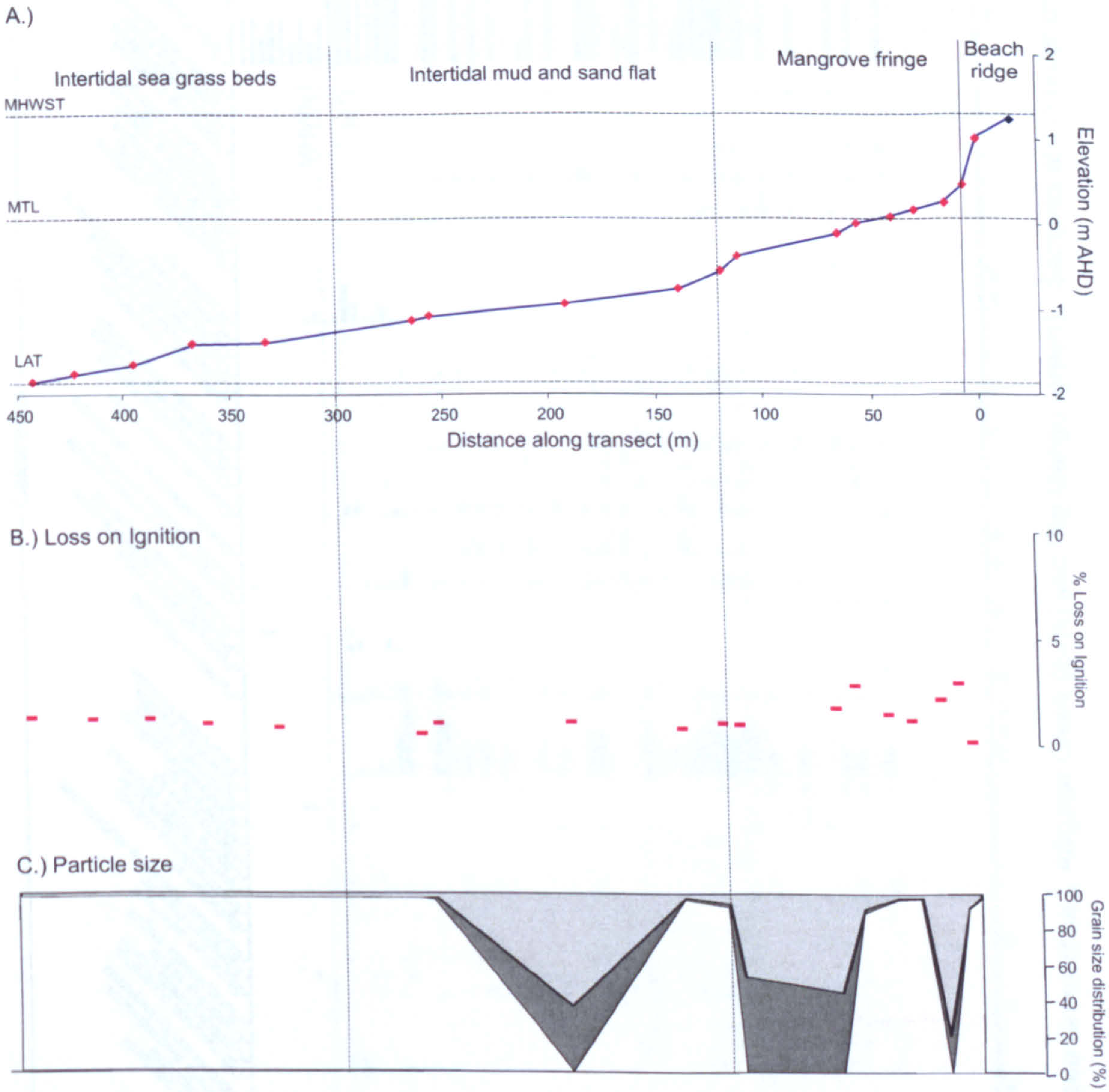


Figure 4.3: Graphs showing a.) elevation, b.) Loss on Ignition and c.) grain size distributions across the modern transect at Big Mango (light grey - silt, dark grey - clay, white - sand). Sample stations are in red, other levelled heights are in blue.

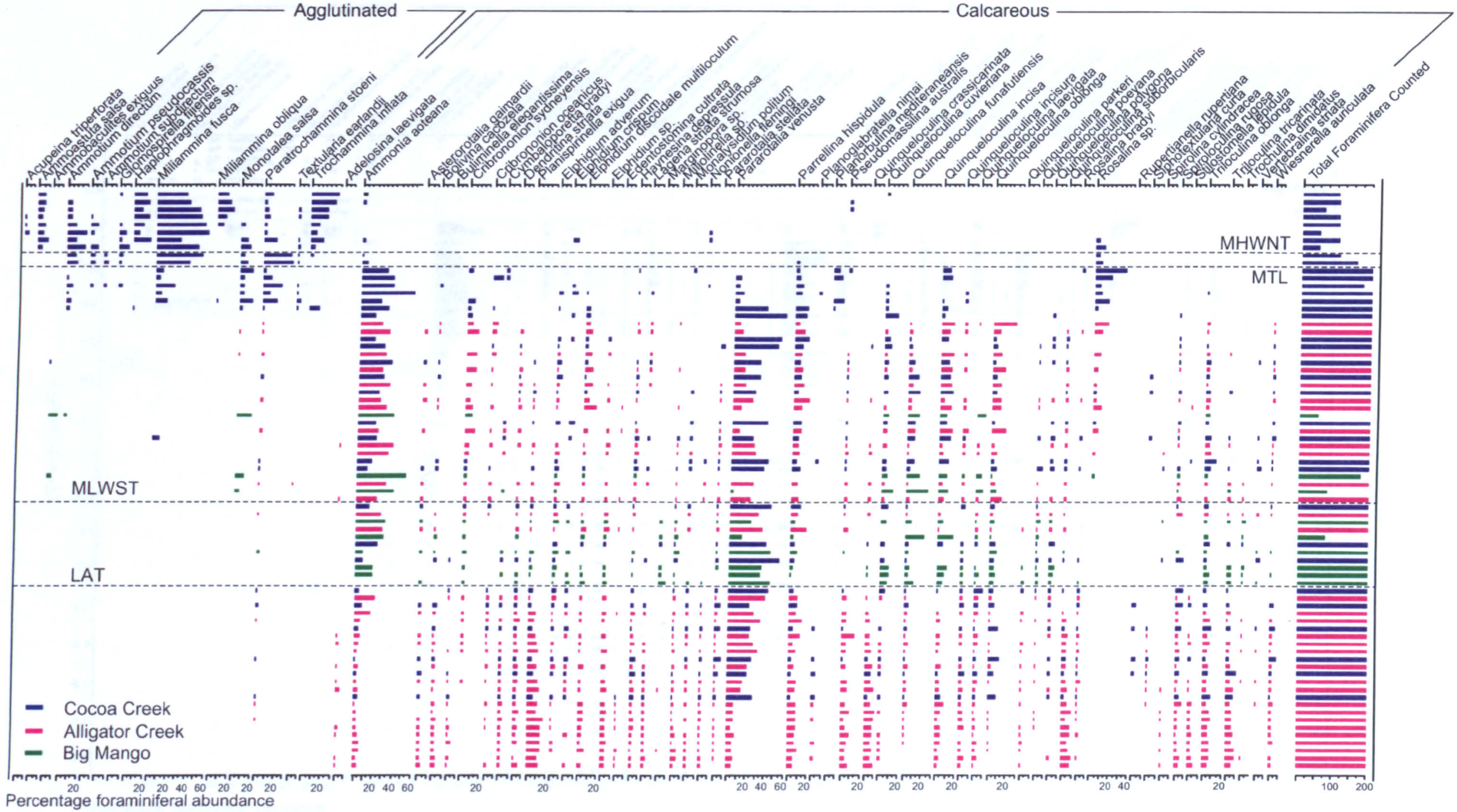


Figure 4.4: Modern foraminiferal data from Cocoa Creek (blue), Alligator Creek (pink) and Big Mango (green). Samples are in order of elevation but are equally spaced on the Y axis.

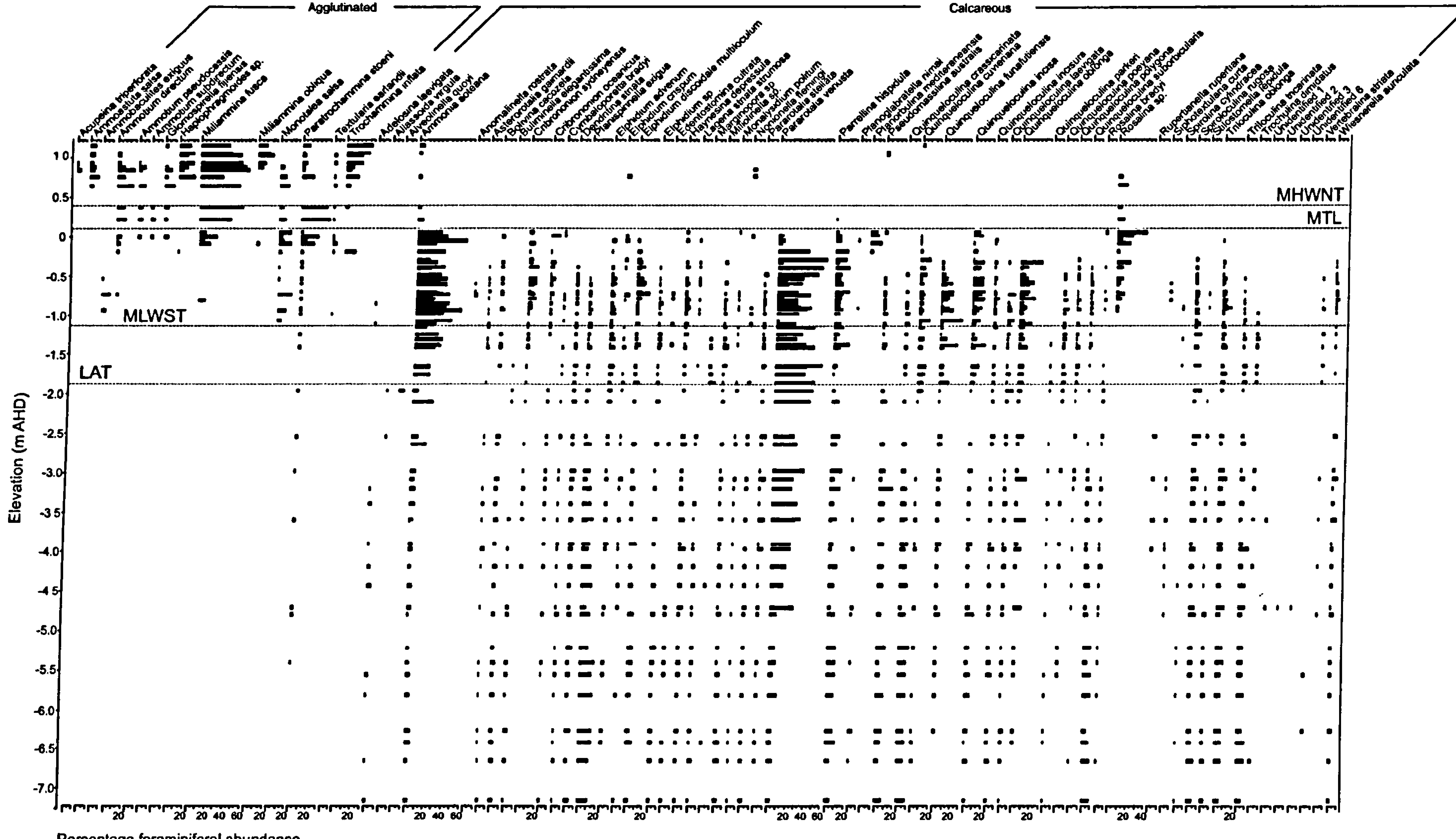


Figure 4.5: Modern foraminiferal data from Cocoa Creek, Alligator Creek and Big Mango. Samples are in order of elevation and plotted against elevation on the Y axis.

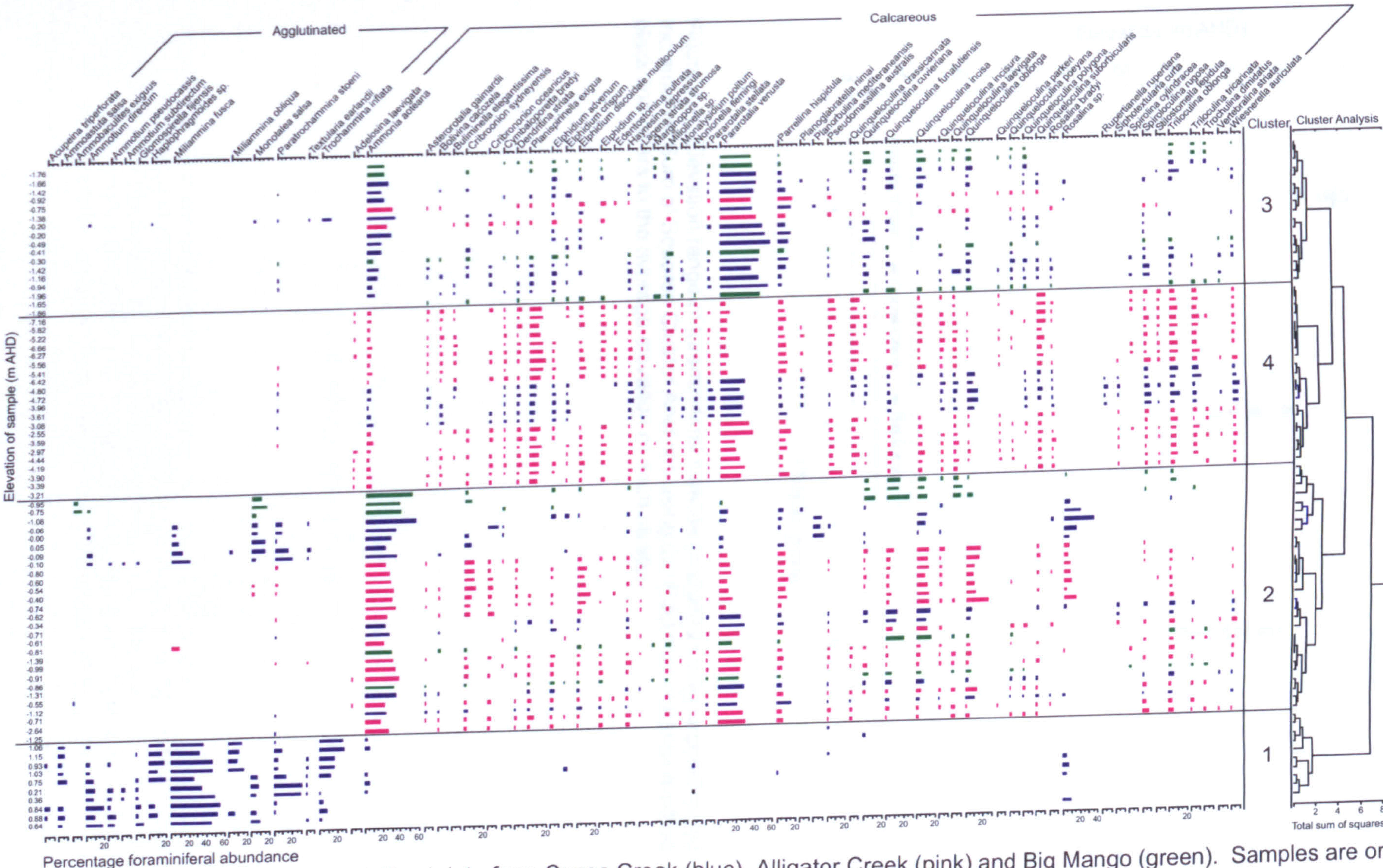


Figure 4.6: Reordered modern foraminiferal data from Cocoa Creek (blue), Alligator Creek (pink) and Big Mango (green). Samples are ordered by their order on the cluster analysis dendrogram. Diagram also shows cluster zones differentiated from the dendrogram.

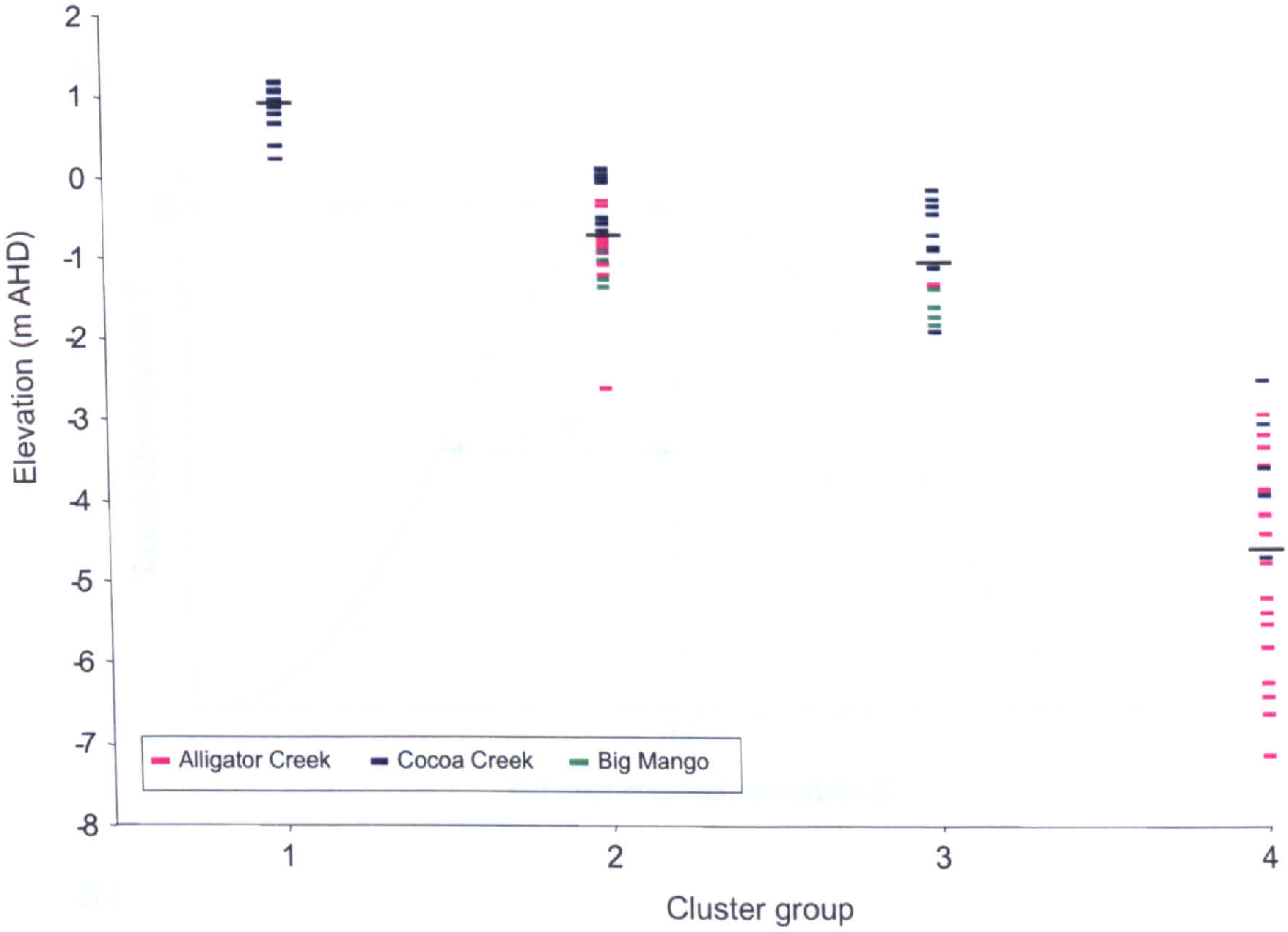


Figure 4.7: Elevation range of foraminiferal classes produced using unconstrained Incremental Sum of Squares Cluster Analysis using the Euclidian distance method. The black line refers to the average elevation of each cluster.

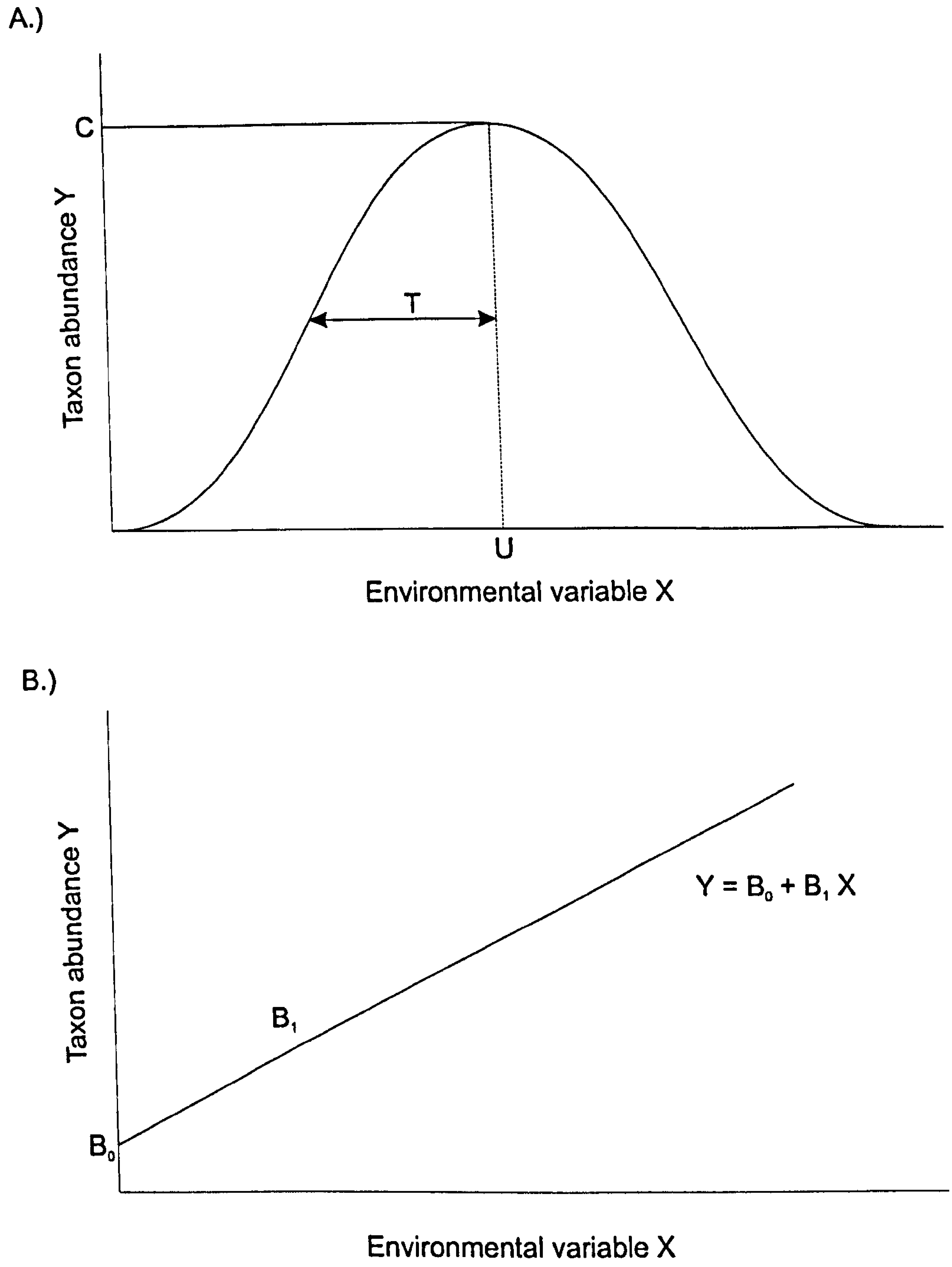


Figure 4.8: Species environment response models. A.) Unimodal relationship between the abundance (Y) of a species and an environmental variable (X). U = optimum, T = tolerance, C = maximum. B.) Linear relationship between the abundance (Y) of a species and an environmental variable (X). The equation for species abundance (Y) in relation to the environmental variable (X) is based on B_0 (intercept) and B_1 (slope) (Birks 1995).

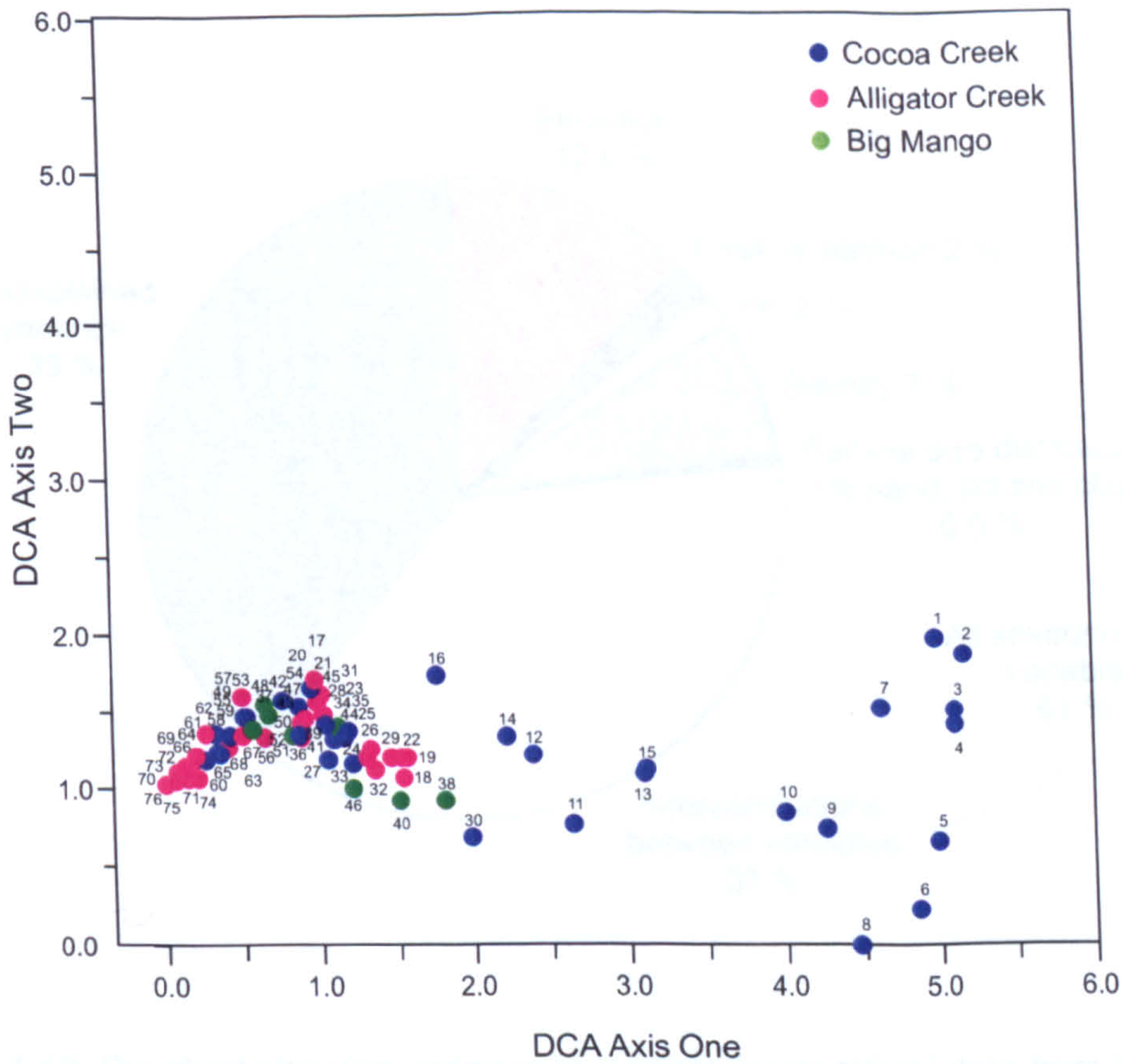


Figure 4.9a: DCA biplot showing foraminiferal sample scores on two DCA axes for all modern data from Cocoa Creek (blue), Alligator Creek (pink) and Big Mango (green). Numbers refer to order of samples by elevation (1 = highest sample at 1.16 m AHD, 76 = lowest sample at -7.16 m AHD).

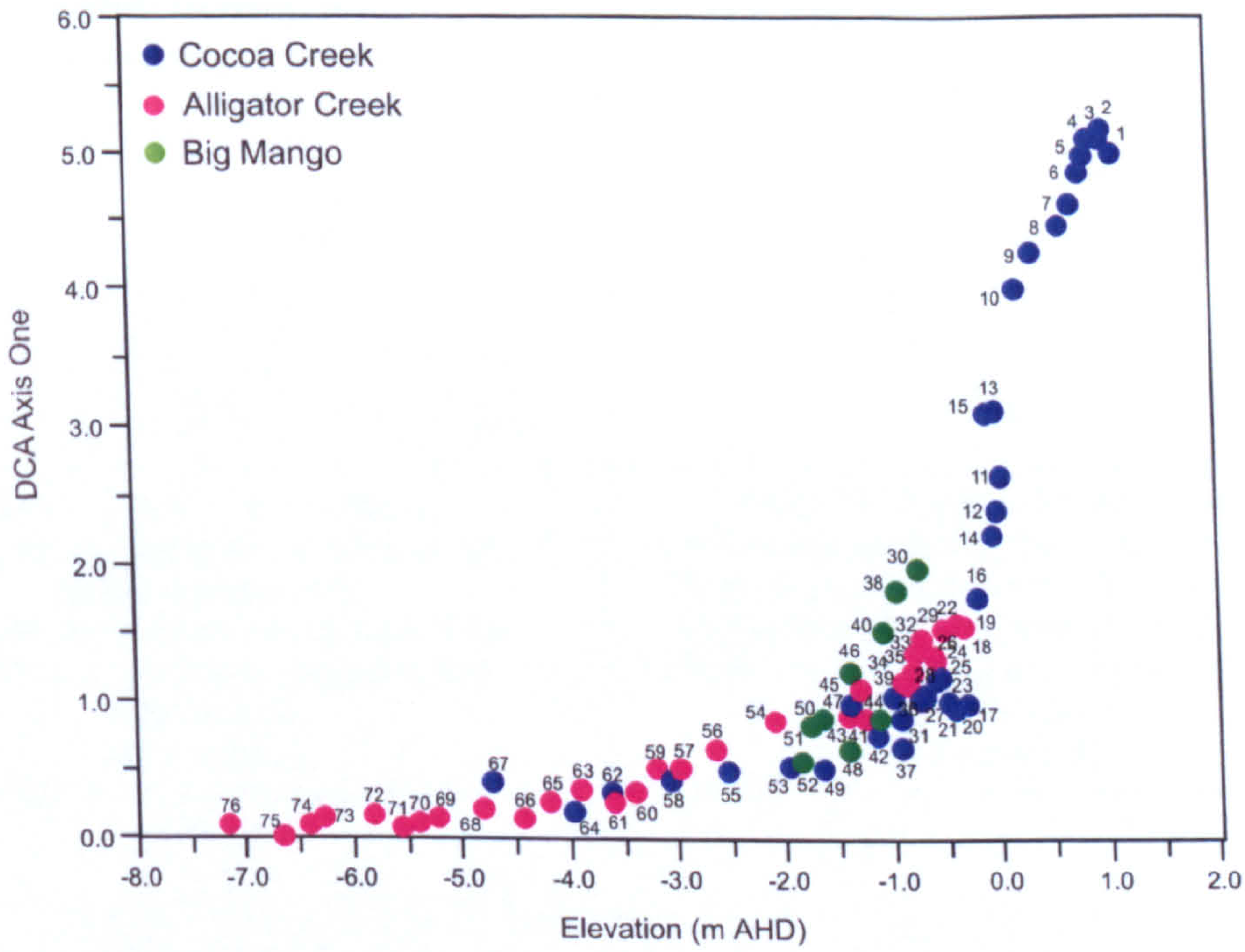


Figure 4.9b: DCA plot showing axis one foraminiferal sample scores for all modern data from Cocoa Creek (blue), Alligator Creek (pink) and Big Mango (green) plotted against elevation. Numbers refer to order of samples by elevation (1 = highest sample at 1.16 m AHD, 76 = lowest sample at -7.16 m AHD).

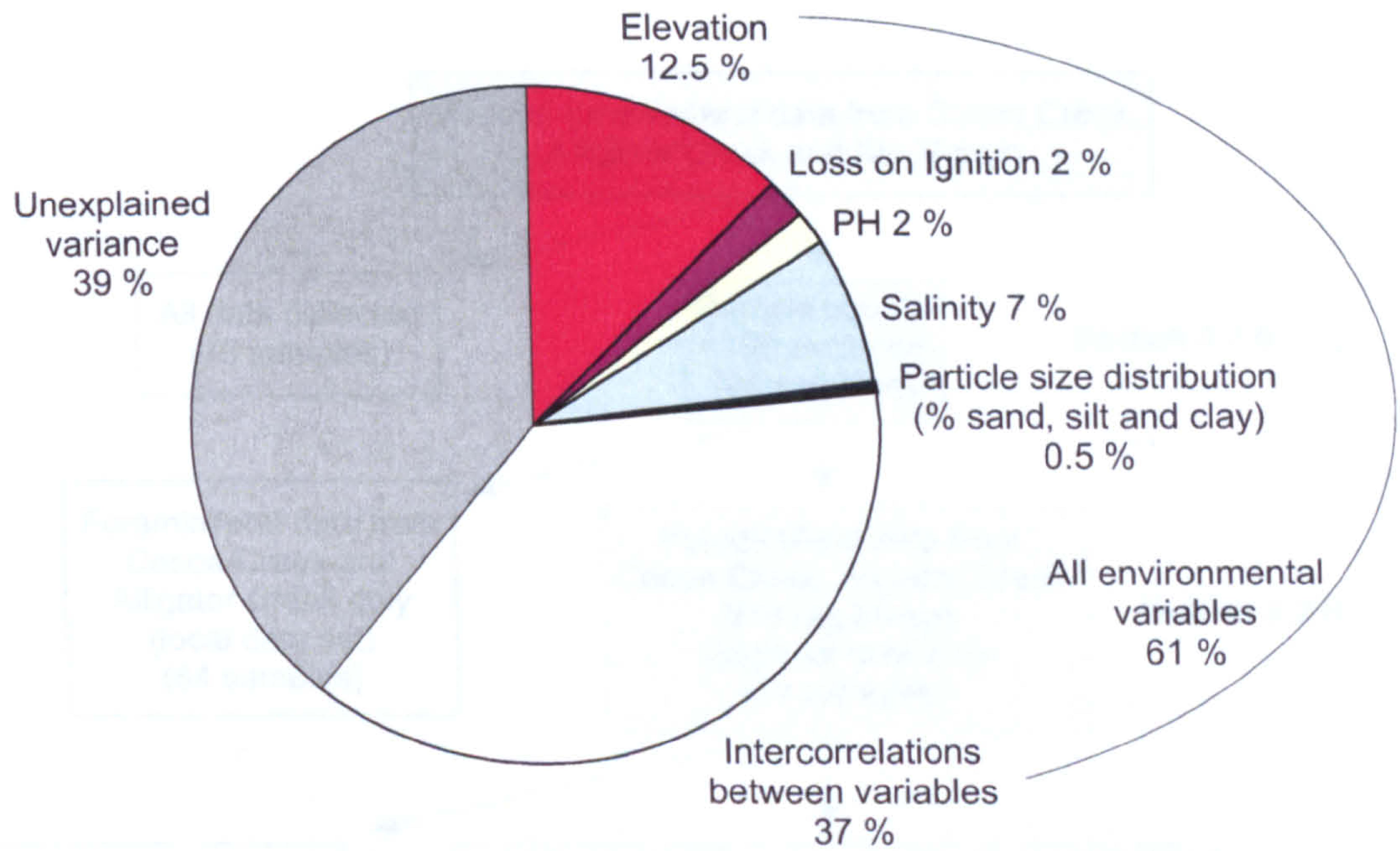


Figure 4.10: Pie chart showing variance in modern foraminiferal data from Cocoa Creek, Alligator Creek and Big Mango explained by the environmental variables investigated.

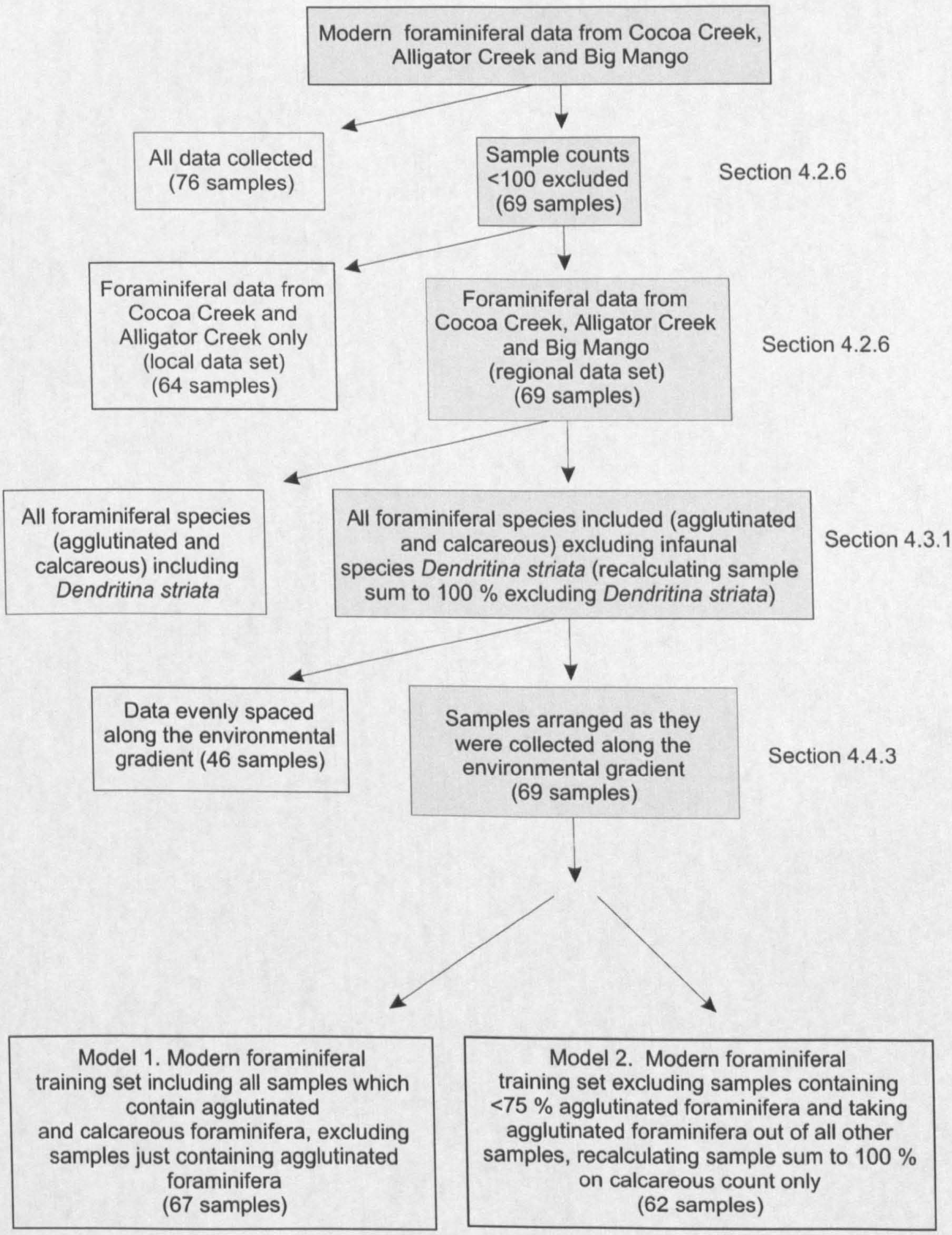
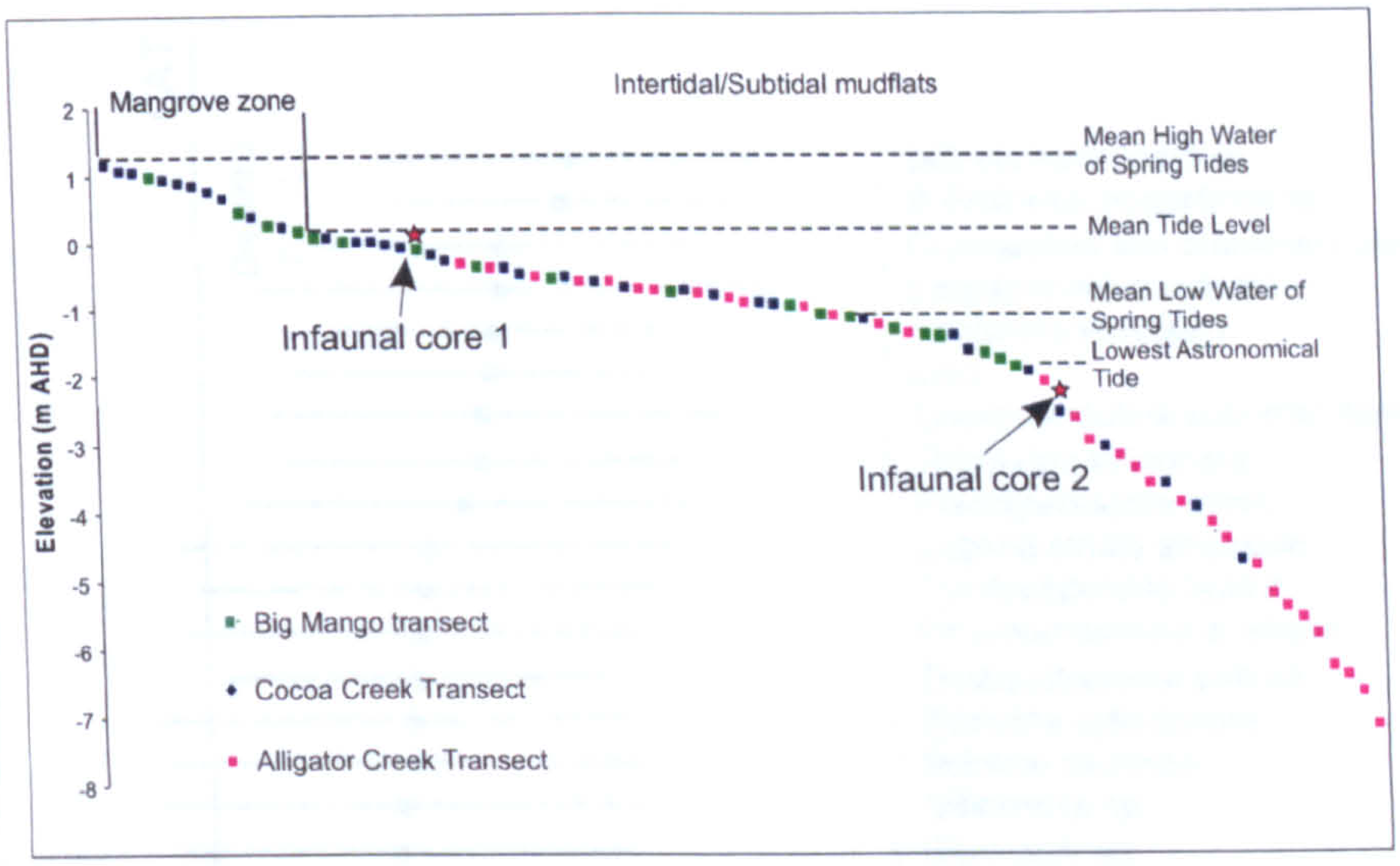
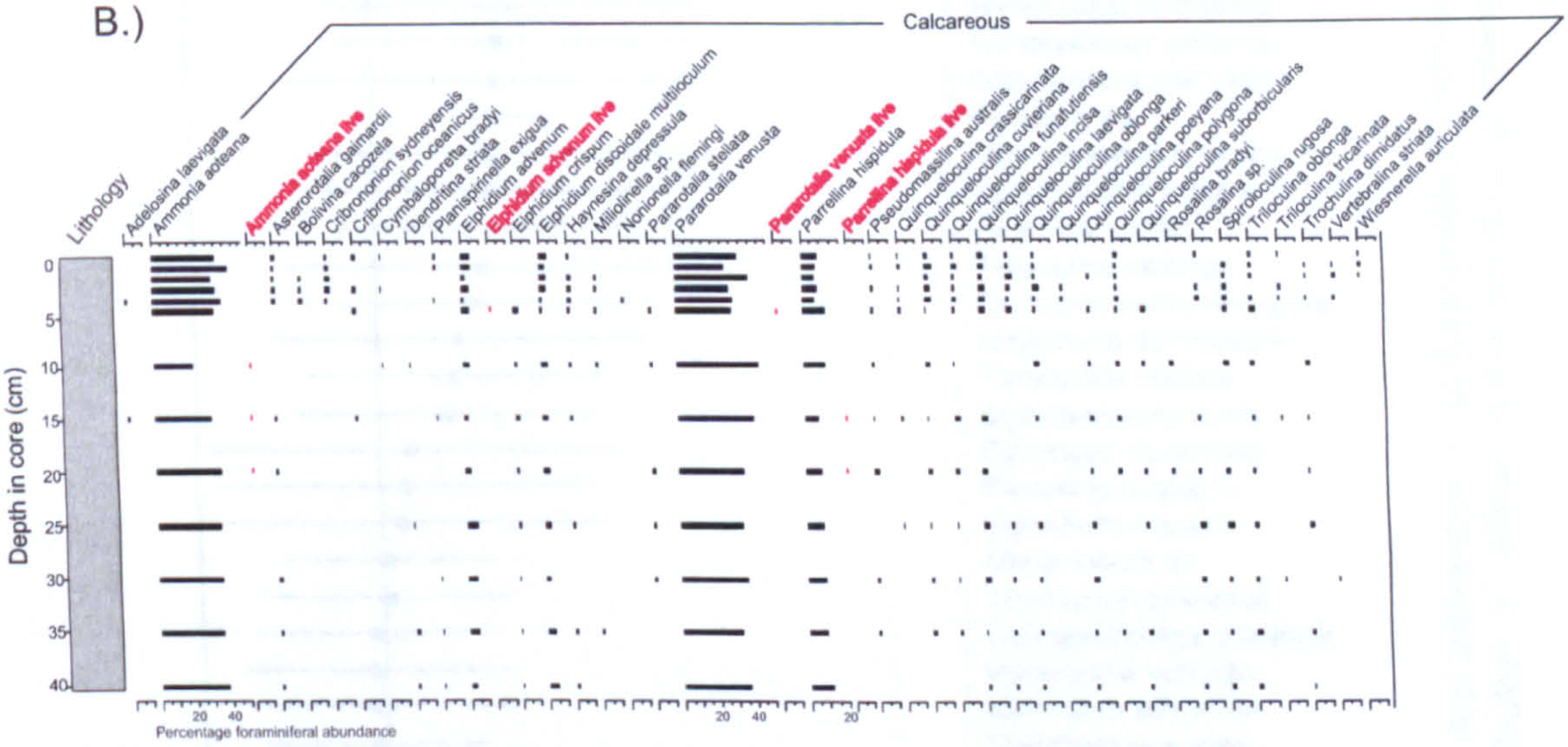


Figure 4.11: Flow chart explaining the range of data sets and models available in developing the eventual transfer function.

A.)



B.)



C.)

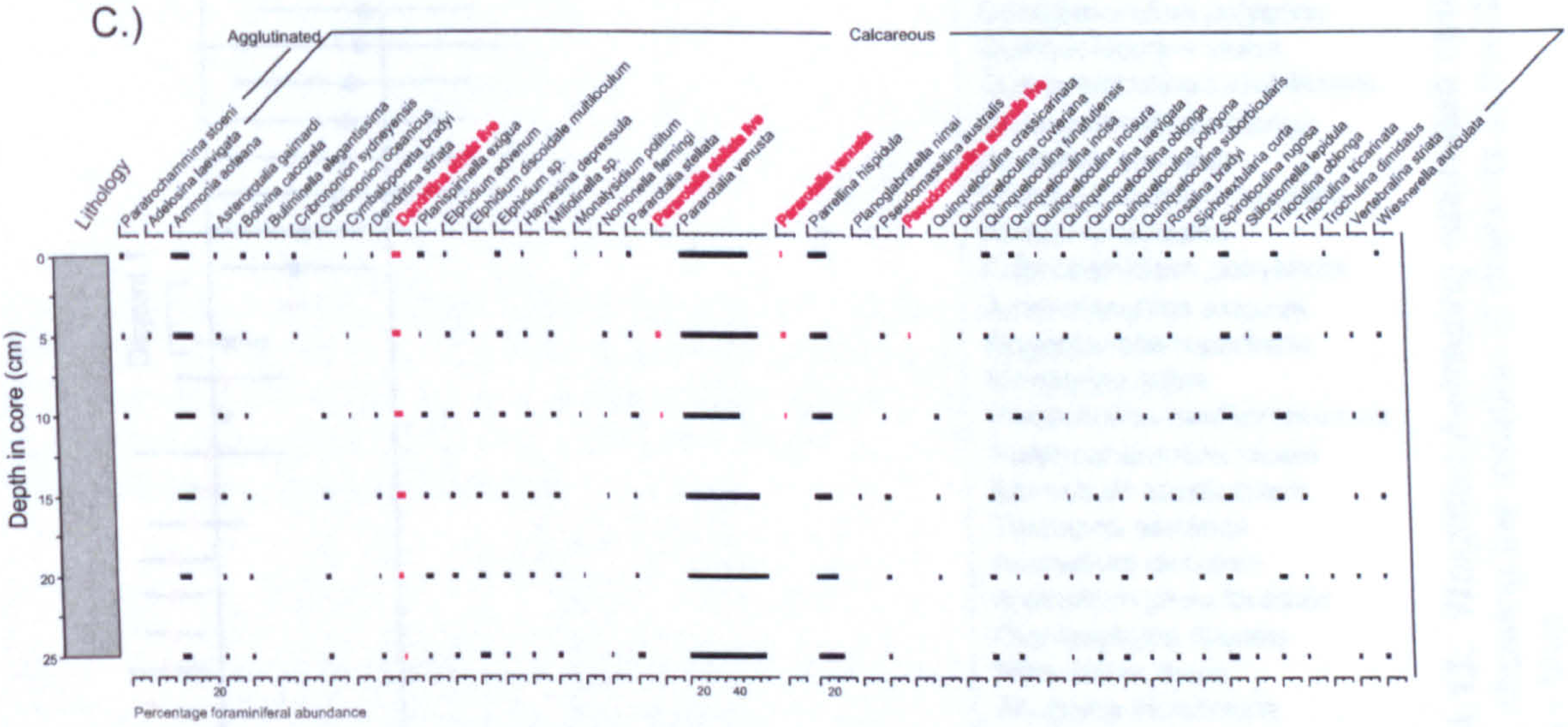


Figure 4.12: A.) Location of infaunal cores in elevation range of the modern foraminiferal samples. B.) Foraminiferal distributions in infaunal core 1. Live foraminiferal percentages are highlighted in red. Lithology is slightly organic shelly silt C.) Foraminiferal distributions in infaunal core 2. Live foraminiferal percentages are highlighted in red. Lithology - shelly silt.

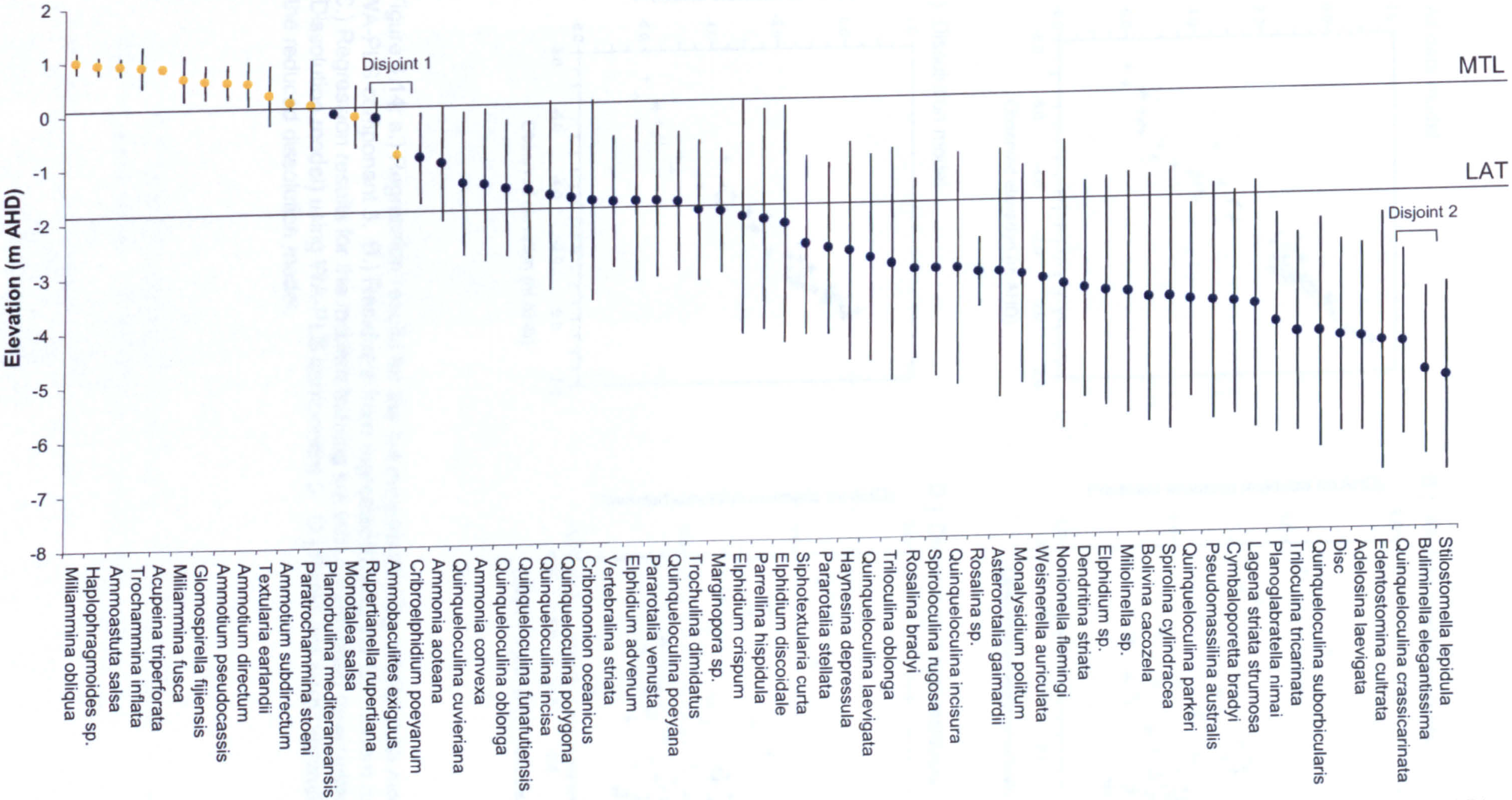


Figure 4.13: Weighted Averaging estimated optima and tolerances of all foraminiferal species from Cocoa Creek, Alligator Creek and Big Mango, showing the location of disjoints in the distribution of optima on the elevation gradient. Agglutinated species - yellow, calcareous species - blue.

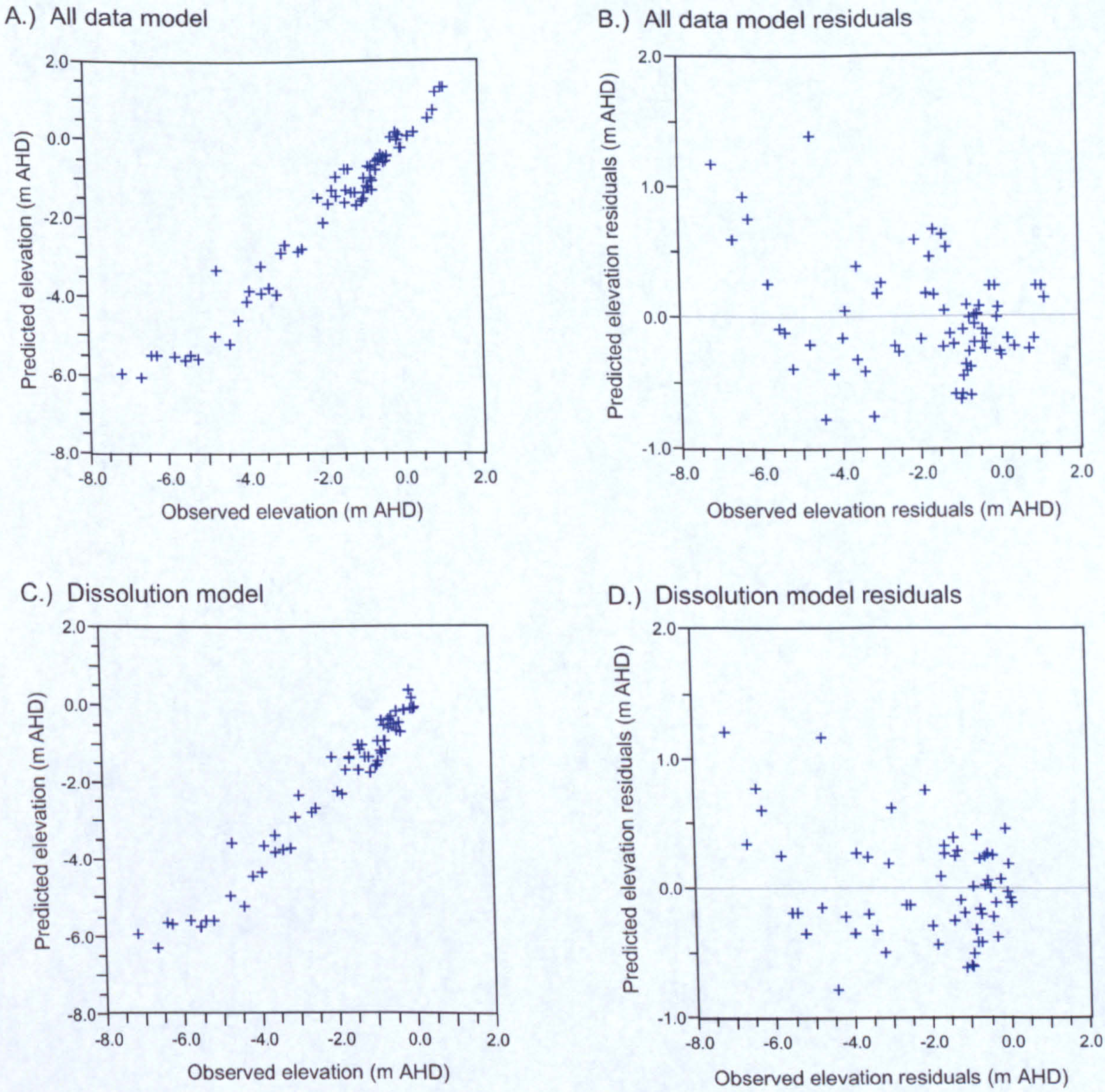


Figure 4.14: a.) Regression results for the full modern training set (All data model) using WA-PLS component 3. B.) Residuals from regression using the full modern data set C.) Regression results for the modern training set with agglutinated foraminifera removed (Dissolution model) using WA-PLS component 3. D.) Residuals from regression using the reduced dissolution model.

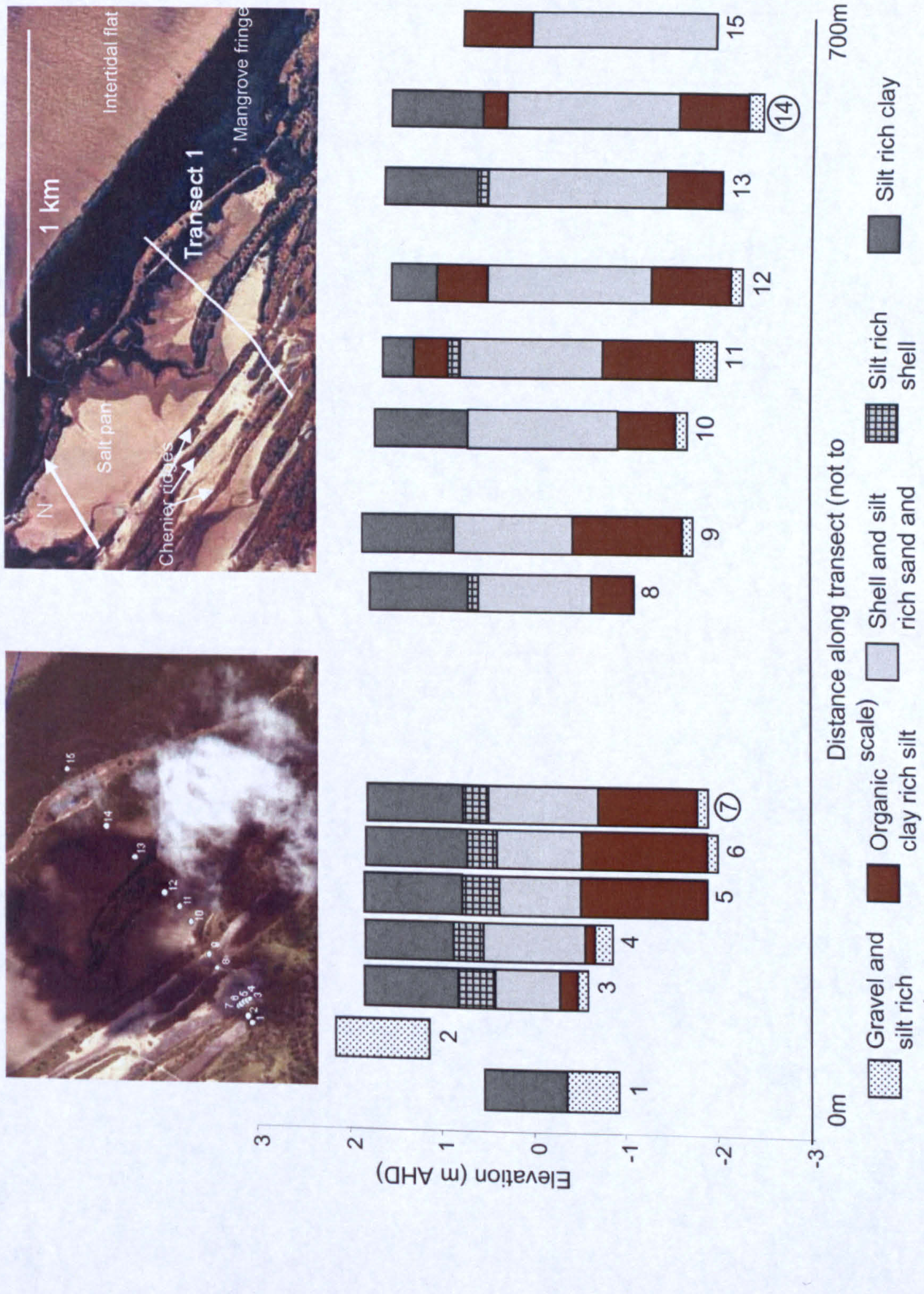


Figure 5.1 Location maps and cored transect 1 at Cocoa Creek. Cores 7 and 14 (circled) have detailed biostratigraphical analysis.

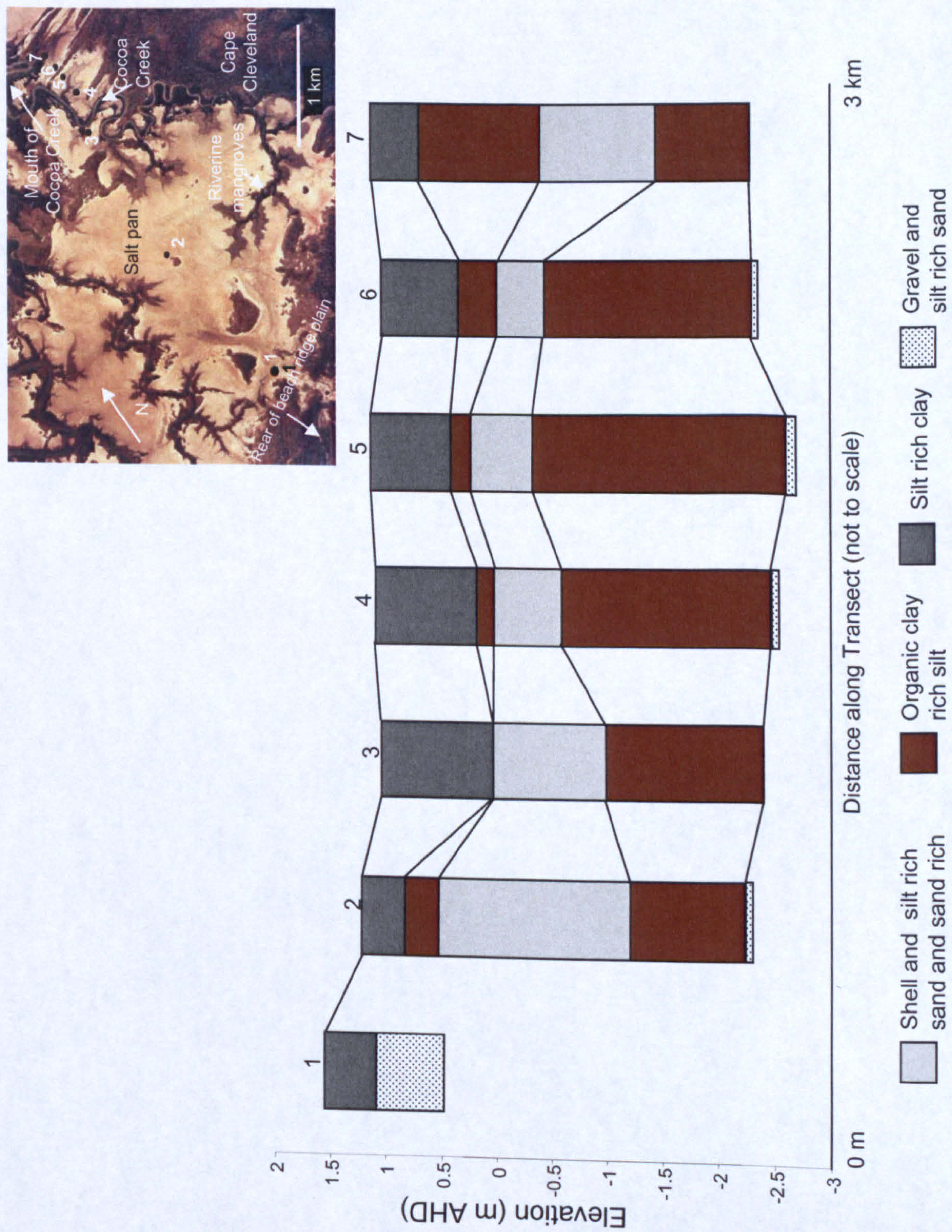


Figure 5.2: Location map and cored Transect 2 at Cocoa Creek.

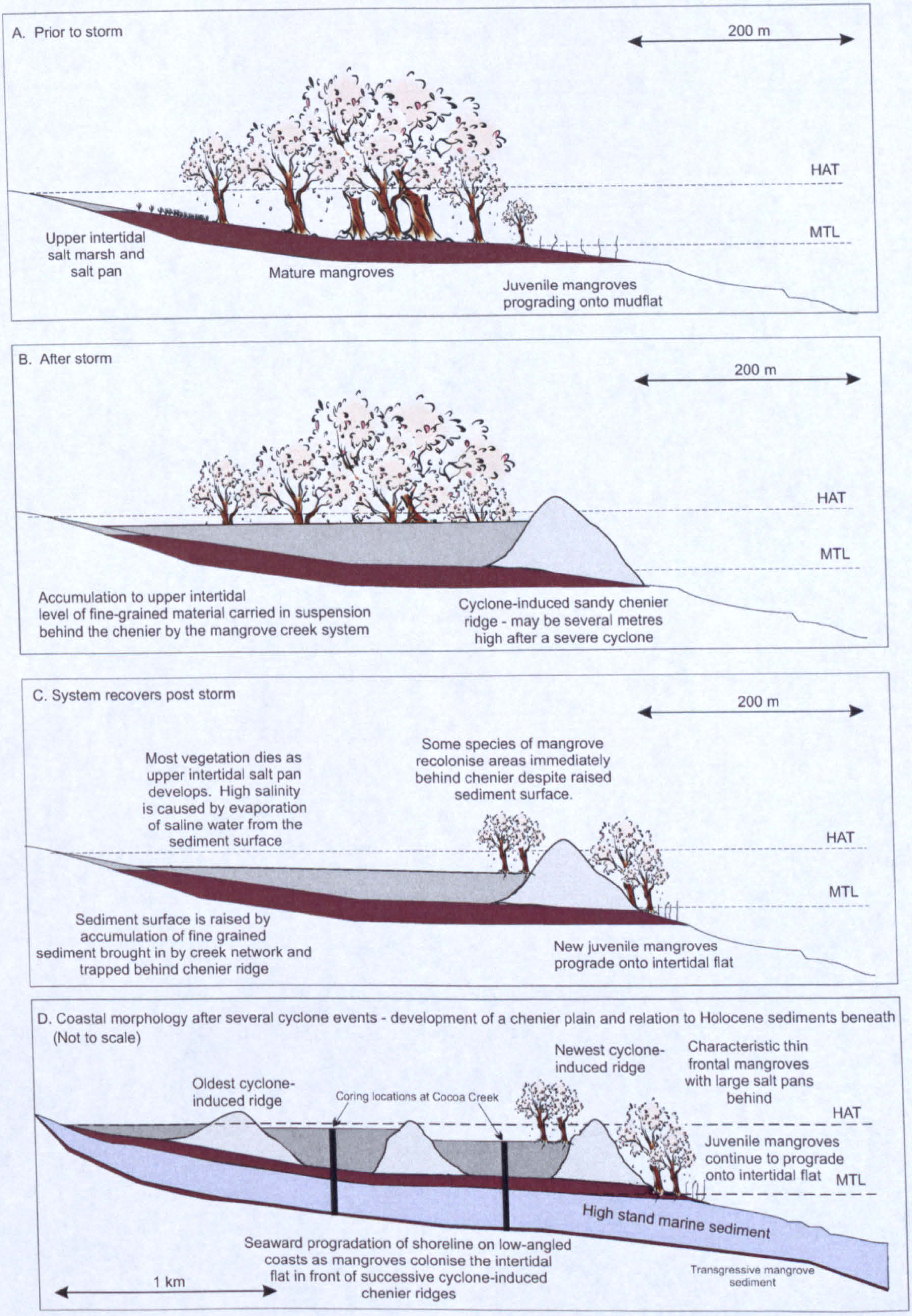


Figure 5.3: Conceptual model of chenier plain development at Cocoa Creek over the late Holocene (after Chappell 1983, Belperio 1983).

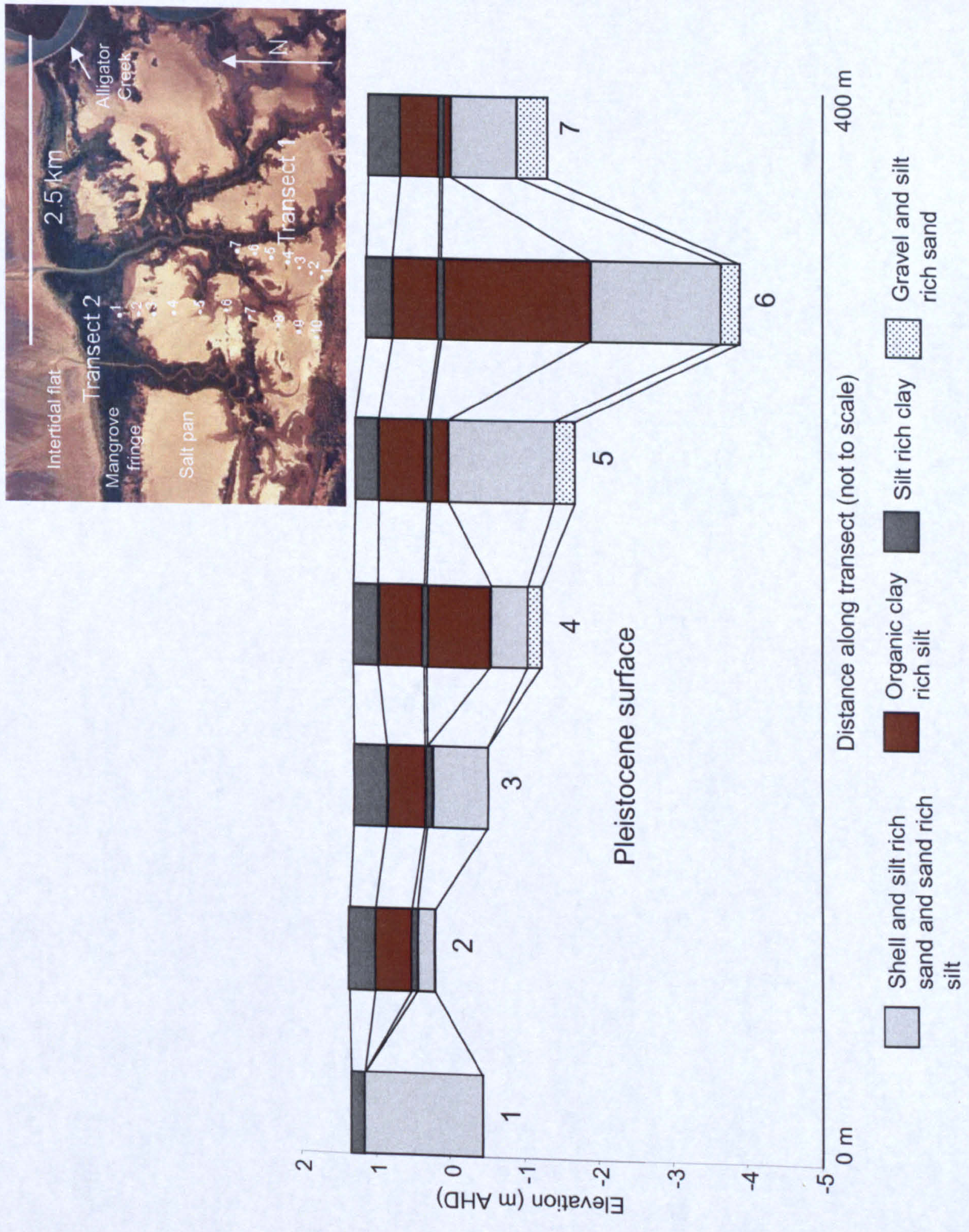


Figure 5.4: Location map and cored transect 1 at Alligator Creek.

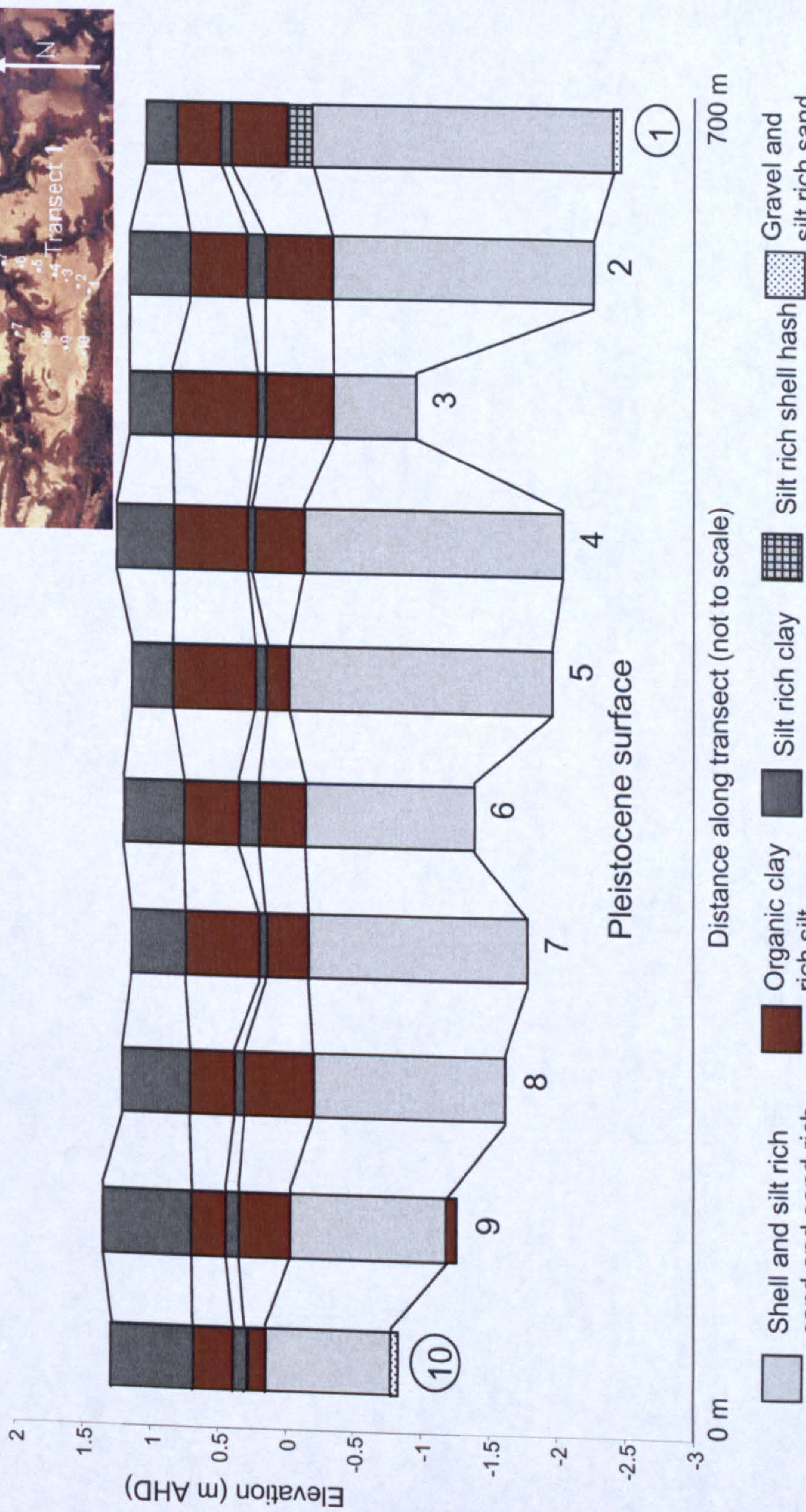


Figure 5.5: Location map and cored transect 2 at Alligator Creek. Cores 1 and 10 (circled) have detailed biostratigraphical analysis.

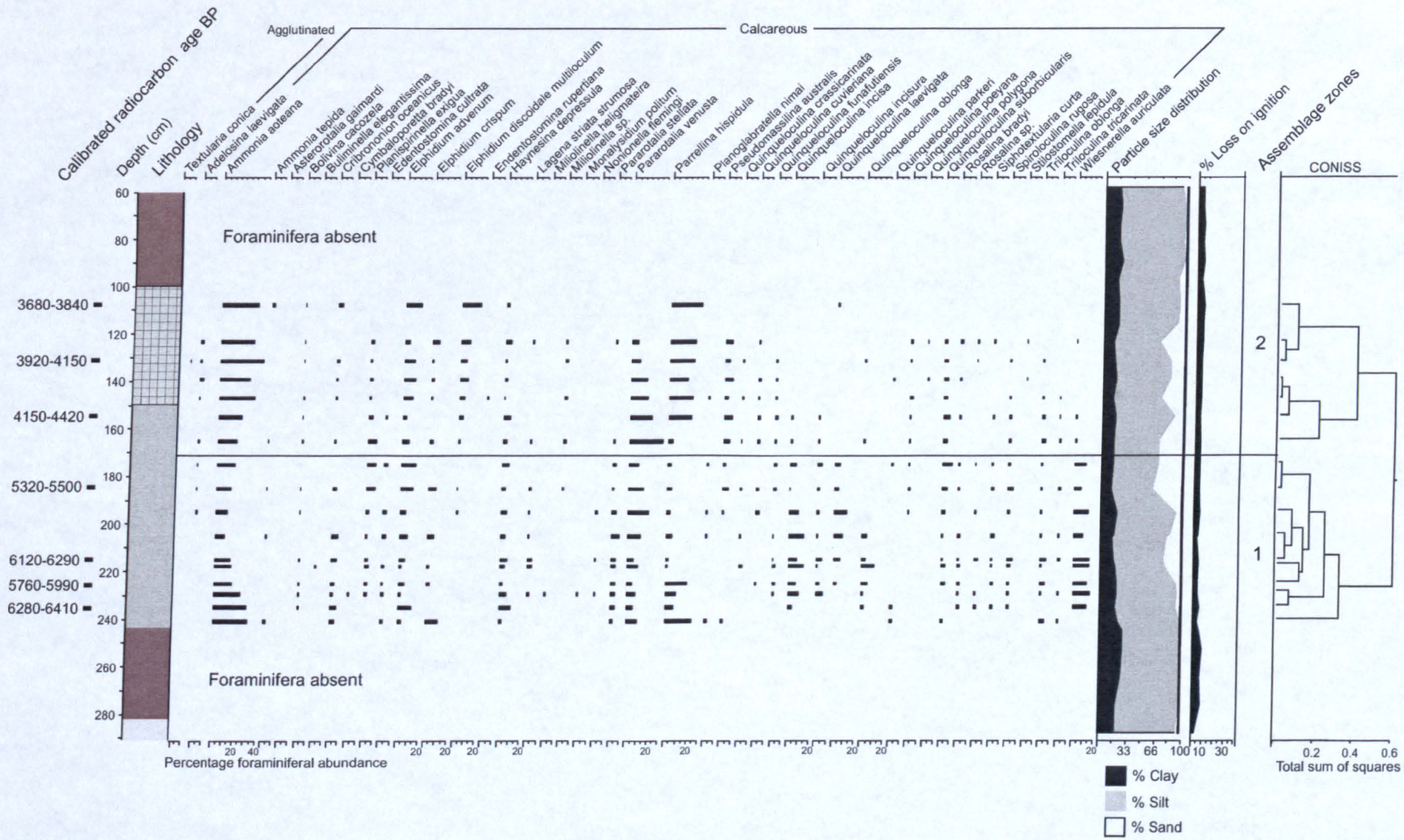


Figure 5.6: Cocoa Creek core 7 foraminiferal abundances with particle size and % loss on ignition data. Foraminiferal abundance is calculated as a percentage of total foraminiferal tests, with cluster analysis dendrogram and assemblage zones. Radiocarbon dates are calibrated using Oxcal v. 3.10 (Bronk-Ramsey 1995, Hughen *et al.* 2004) using 2 σ ranges. Core lithology is summarised as dark brown - organic silt, mid grey - sand-rich silt, mid grey with cross pattern - sand-rich silt with frequent shells, light grey - silt-rich sand.

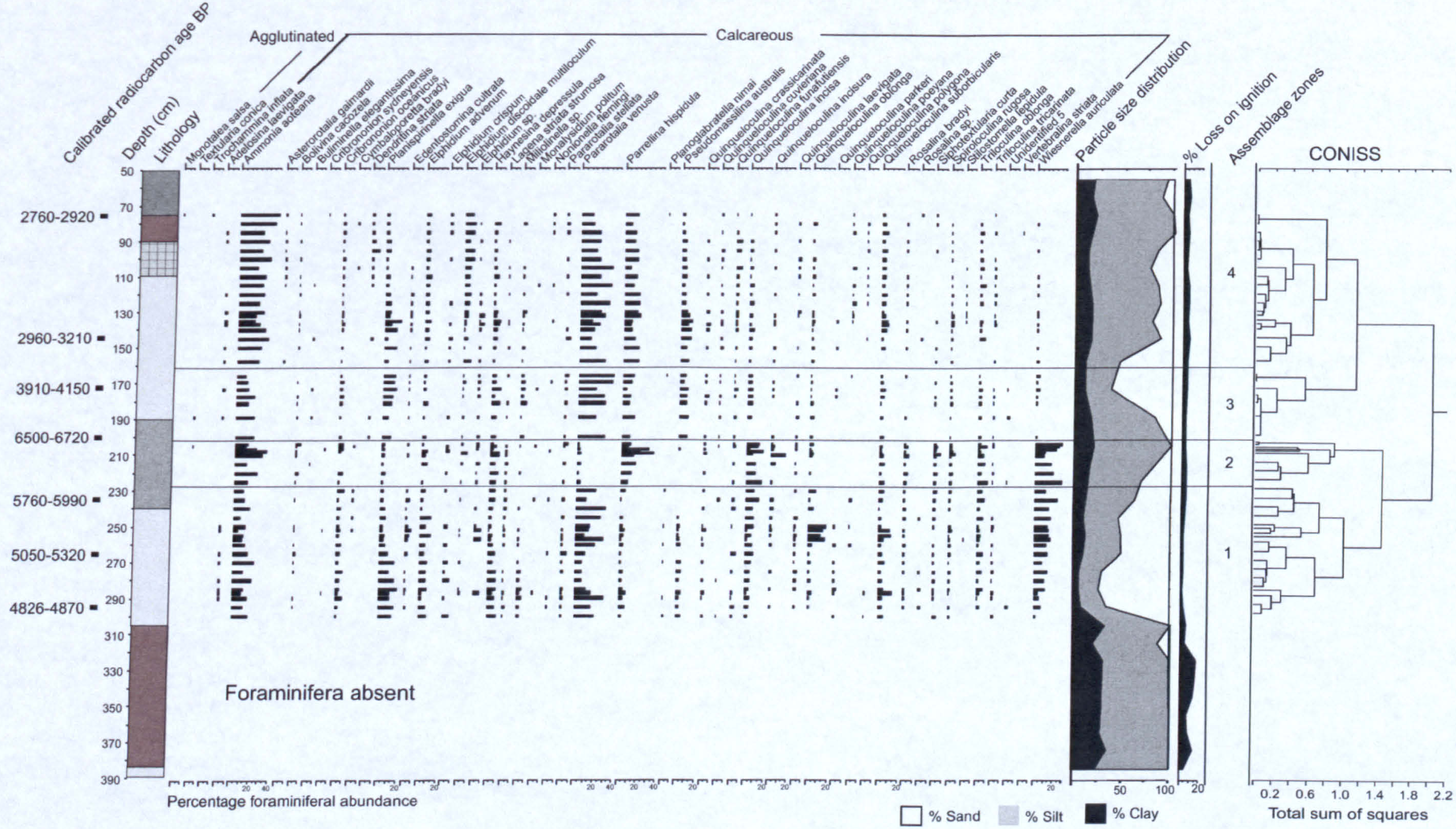


Figure 5.7: Cocoa Creek core 14 foraminiferal abundances with particle size and % loss on ignition data. Foraminiferal abundance is calculated as a percentage of total foraminiferal tests, with CONISS cluster analysis dendrogram and assemblage zones. Radiocarbon dates are calibrated using Oxcal v. 3.10 (Bronk-Ramsey 1995, Hughen *et al.* 2004) using 2 σ ranges. Core lithology is summarised as dark brown - organic silt, mid grey - sand rich silt, mid grey with cross pattern - sand rich silt with frequent shells, light grey - silt rich sand.

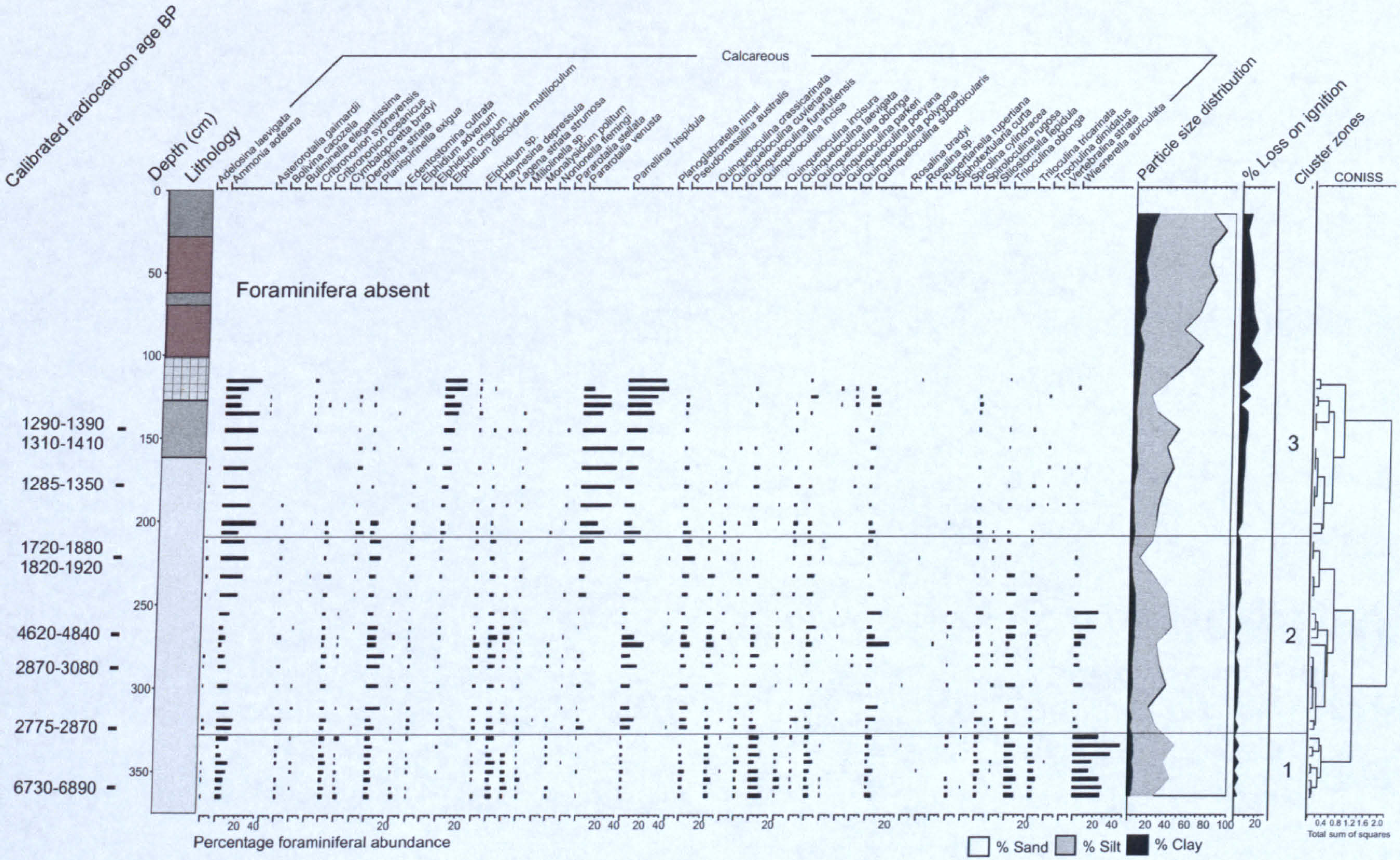


Figure 5.8:Alligator Creek core 1 foraminiferal abundances with particle size and % loss on ignition data. Foraminiferal abundance is calculated as a percentage of total foraminiferal tests, with cluster analysis dendrogram and cluster zones. Radiocarbon dates are calibrated using Oxcal v. 3.10 (Bronk-Ramsey 1995, Hughen *et al.* 2004) using 2 σ ranges. Core lithology is summarised as dark brown - organic silt, mid grey - sand rich silt, mid grey with cross pattern - sand rich silt with frequent shells, light grey - silt rich sand.

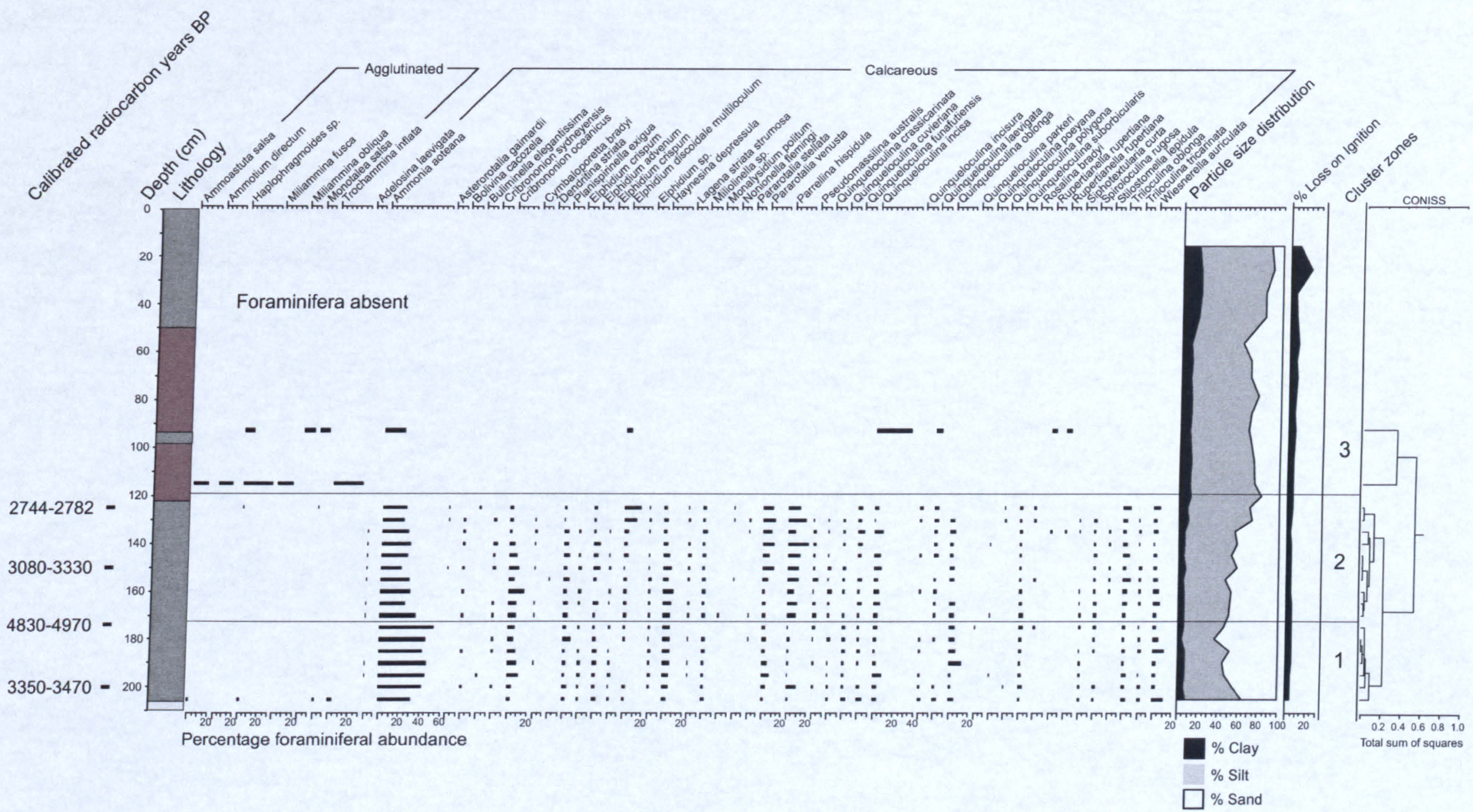


Figure 5.9: Alligator Creek core 10 foraminiferal abundances with particle size and % loss on ignition data. Foraminiferal abundance is calculated as a percentage of total foraminiferal tests, with CONISS cluster analysis dendrogram and zones. Radiocarbon dates are calibrated using Oxcal v. 3.10 (Bronk-Ramsey 1995, Hughen *et al.* 2004) using 2 σ ranges. Core lithology is summarised as dark brown - organic silt, mid grey - sand rich silt, light grey - silt rich sand.

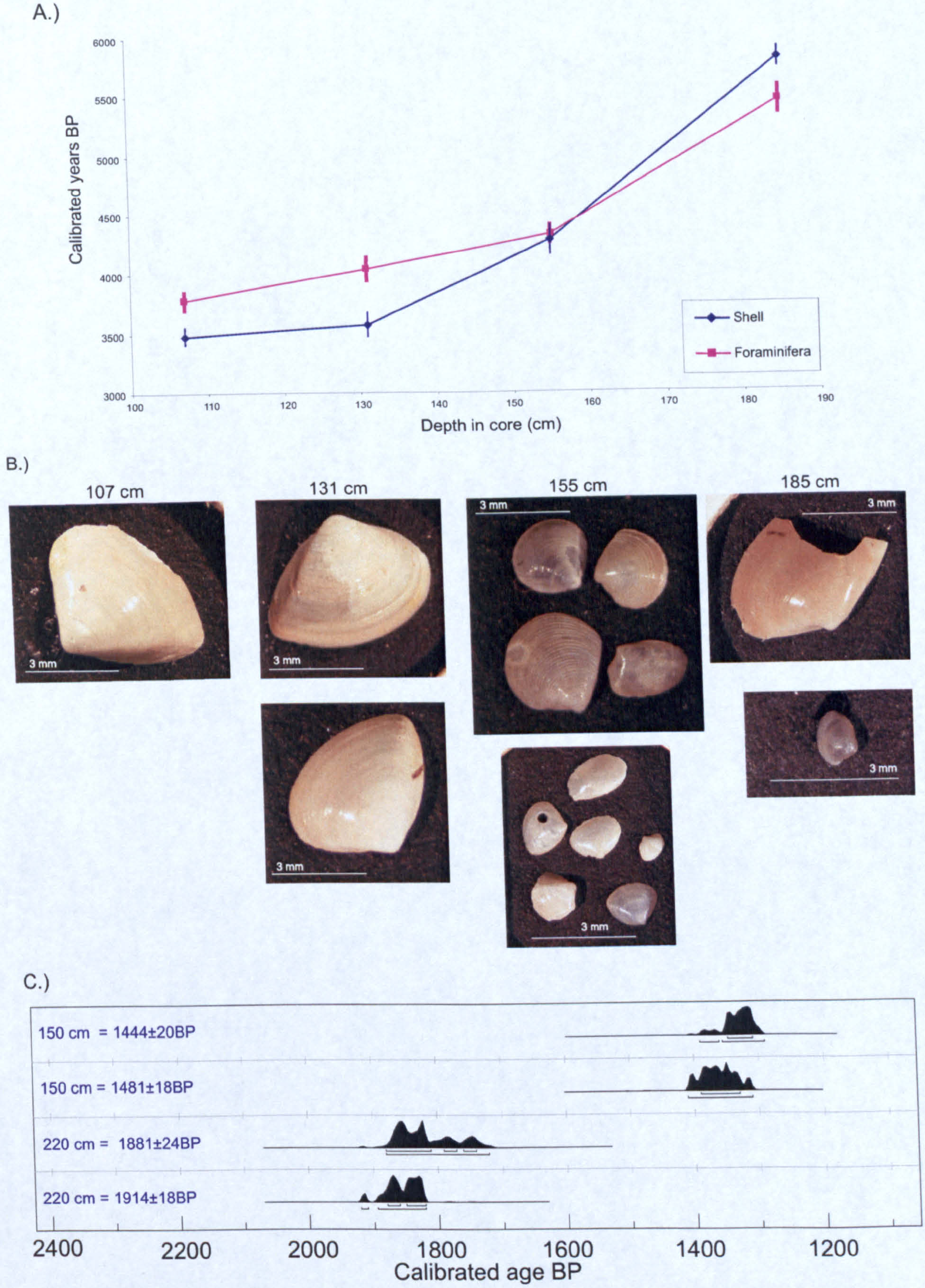


Figure 5.10: A.) Calibrated radiocarbon dates on foraminifera and unarticulated bivalve shells from Cocoa Creek Core 7. Dates are 2 σ calibrated using Oxcal 3.10 (Bronk Ramsay 1995, Hughen *et al* 2004). B.) Photographs of bivalve shells dated for each paired sample in Cocoa Creek Core 7. C.) Calibrated 2 σ age range of radiocarbon dates on foraminifera from the same horizons in Alligator Creek Core 1. No dates are corrected for the Marine Reservoir Effect.

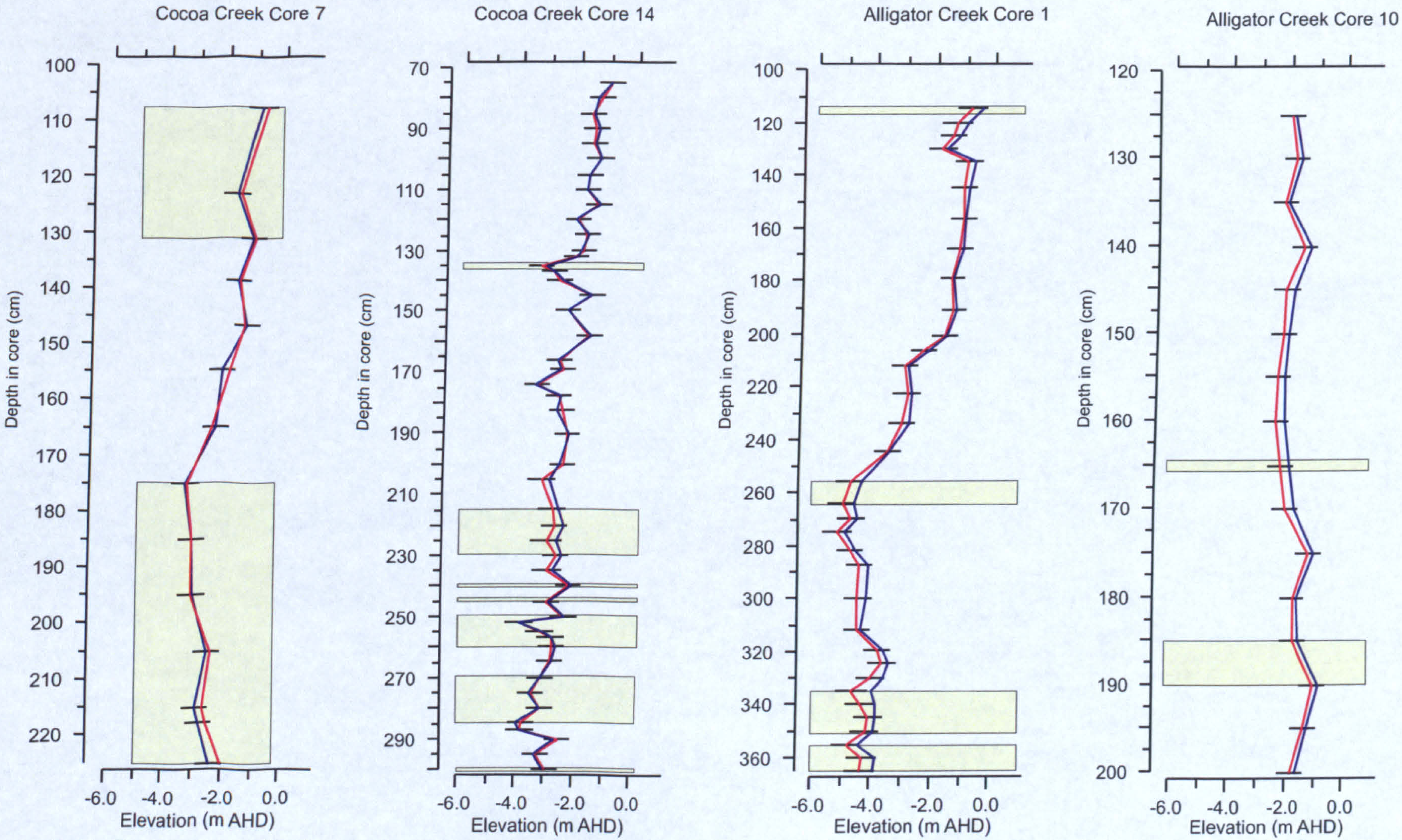


Figure 5.11: Reconstructed palaeosurface elevations with all data model (red) and dissolution model (blue) using WA-PLS component 3 for each fossil core. Areas highlighted in yellow have poor modern analogues (Minimum dissimilarity coefficient above the largest minimum dissimilarity calculated between all samples in the modern training set. Error terms are sample specific (1 σ) bootstrapped reconstruction errors using the all data model.

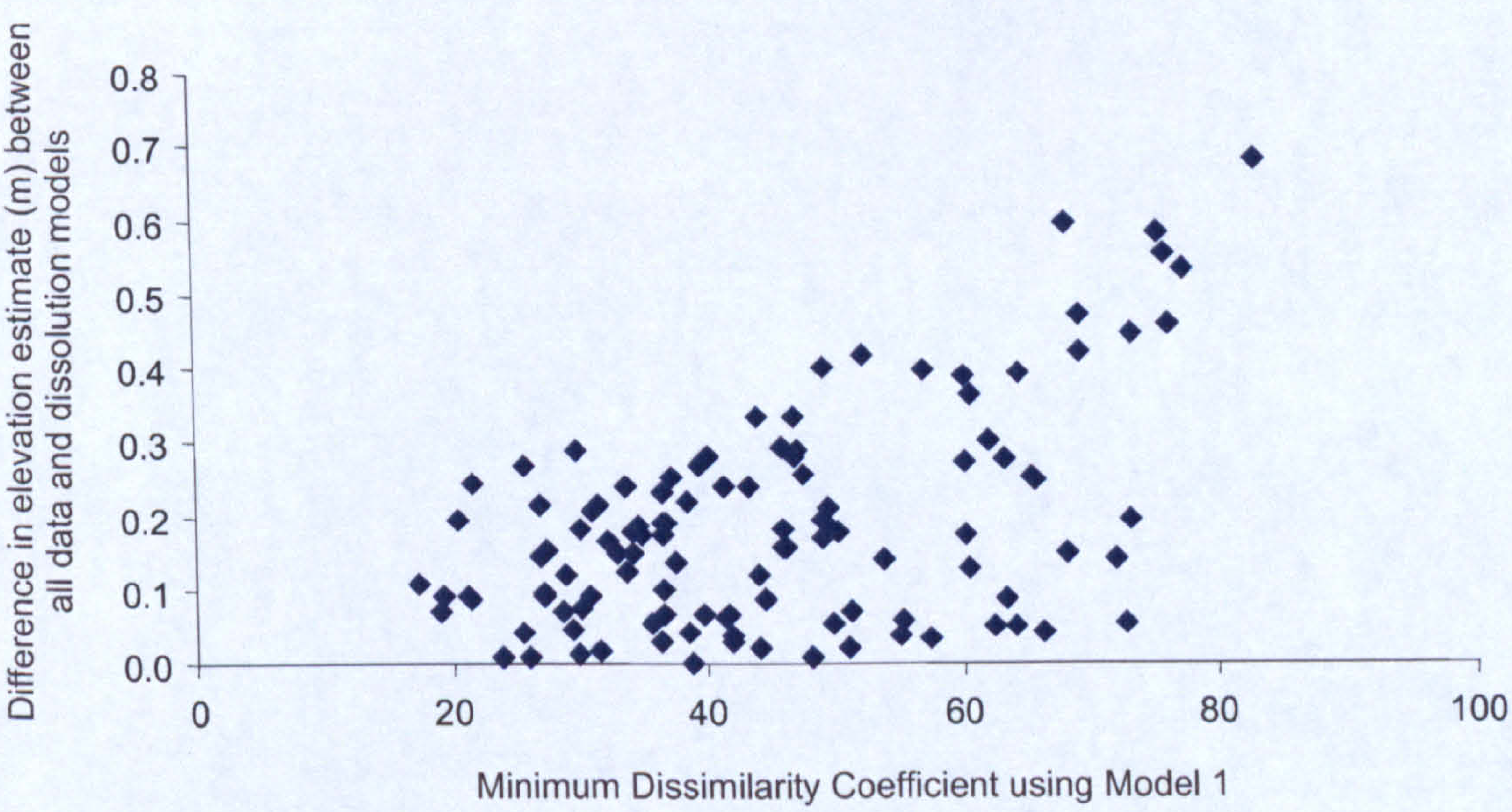


Figure 5.12: Graph showing relationship between Minimum Dissimilarity Coefficient for each fossil sample (calculated using MAT) and differences in reference water level elevation estimate using WA-PLS and the two different models of species assemblage composition (all data model and dissolution model).

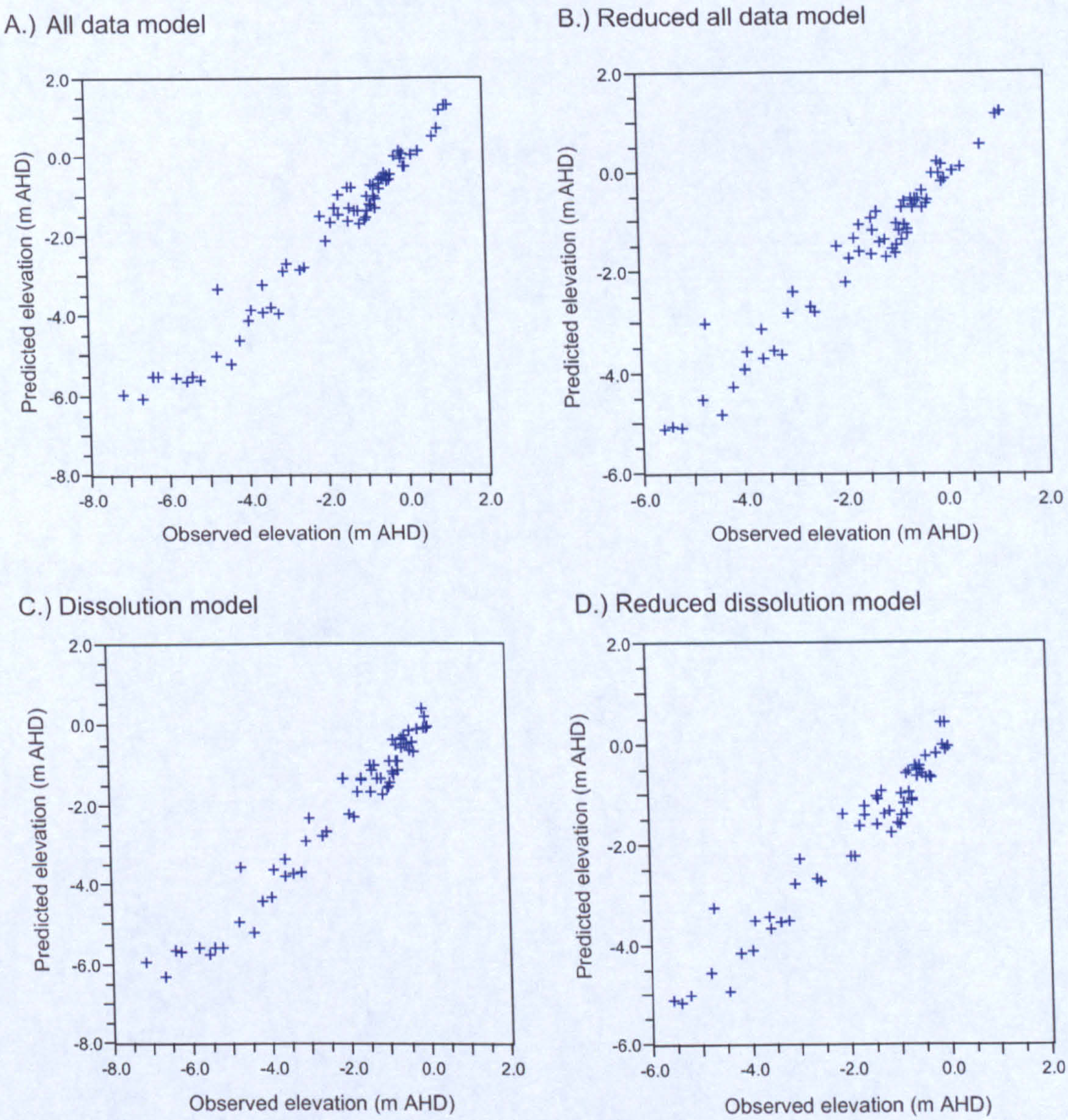


Figure 5.13: a.) Regression results for the all data model using WA-PLS component 3. B.) Regression results for the reduced all data model using WA-PLS component 3 C.) Regression results for the dissolution using WA-PLS component 3. D.) Regression results for the reduced dissolution model using WA-PLS component 3.

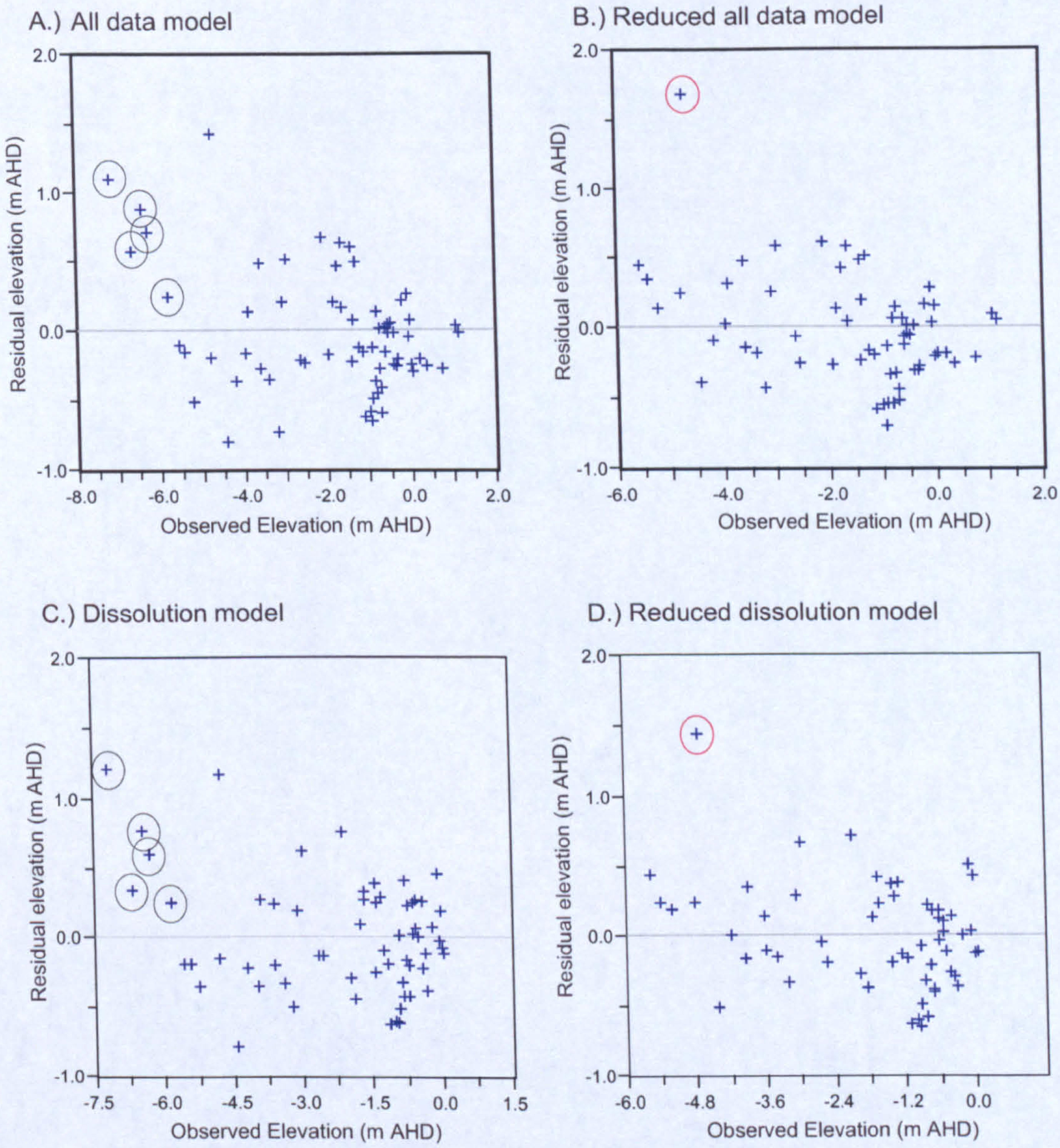


Figure 5.14: a.) Regression residuals for the all data model using WA-PLS component 3.
B.) Regression residuals for the reduced all data model using WA-PLS component 3
C.) Regression residuals for the dissolution model using WA-PLS component 3.
D.) Regression residuals for the reduced dissolution model using WA-PLS component 3.
Samples circled in black are removed in the reduced models. The sample circled in red has the highest residual in the reduced models..

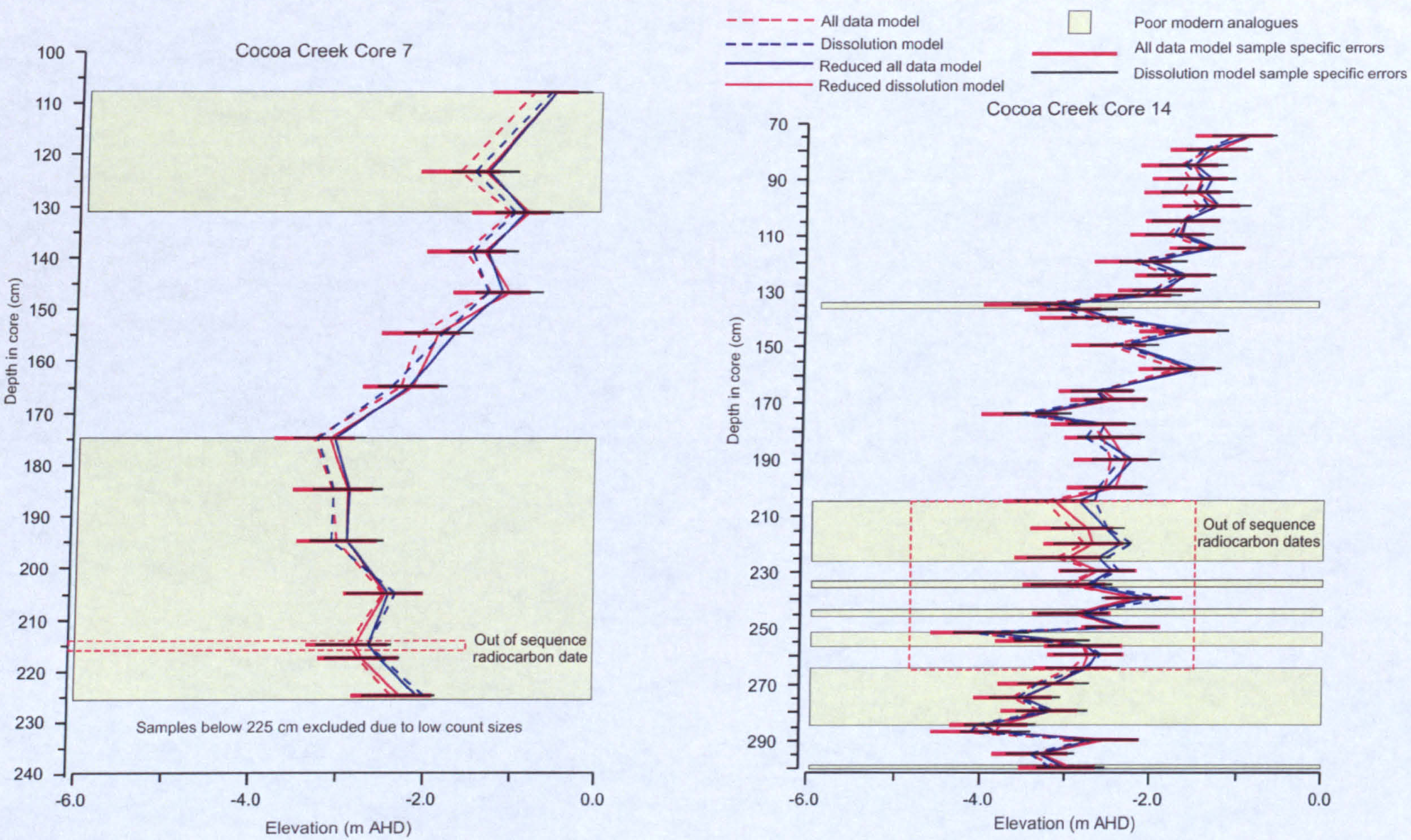


Figure 5.15a: Reconstructed palaeosurface elevations with all data model (dashed red line), reduced all data model (solid red line), dissolution model (dashed blue line) and reduced dissolution model (solid blue line) using WA-PLS component 3 for cores from Cocoa Creek. Areas highlighted in yellow do not have modern analogues (Minimum dissimilarity coefficient above the largest minimum dissimilarity of samples in the modern training set). Error terms are sample specific bootstrapped reconstruction errors using all data model (red) and reduced all data model (black). Area within red dotted line refers to parts of the cores where there are radiocarbon age reversals.

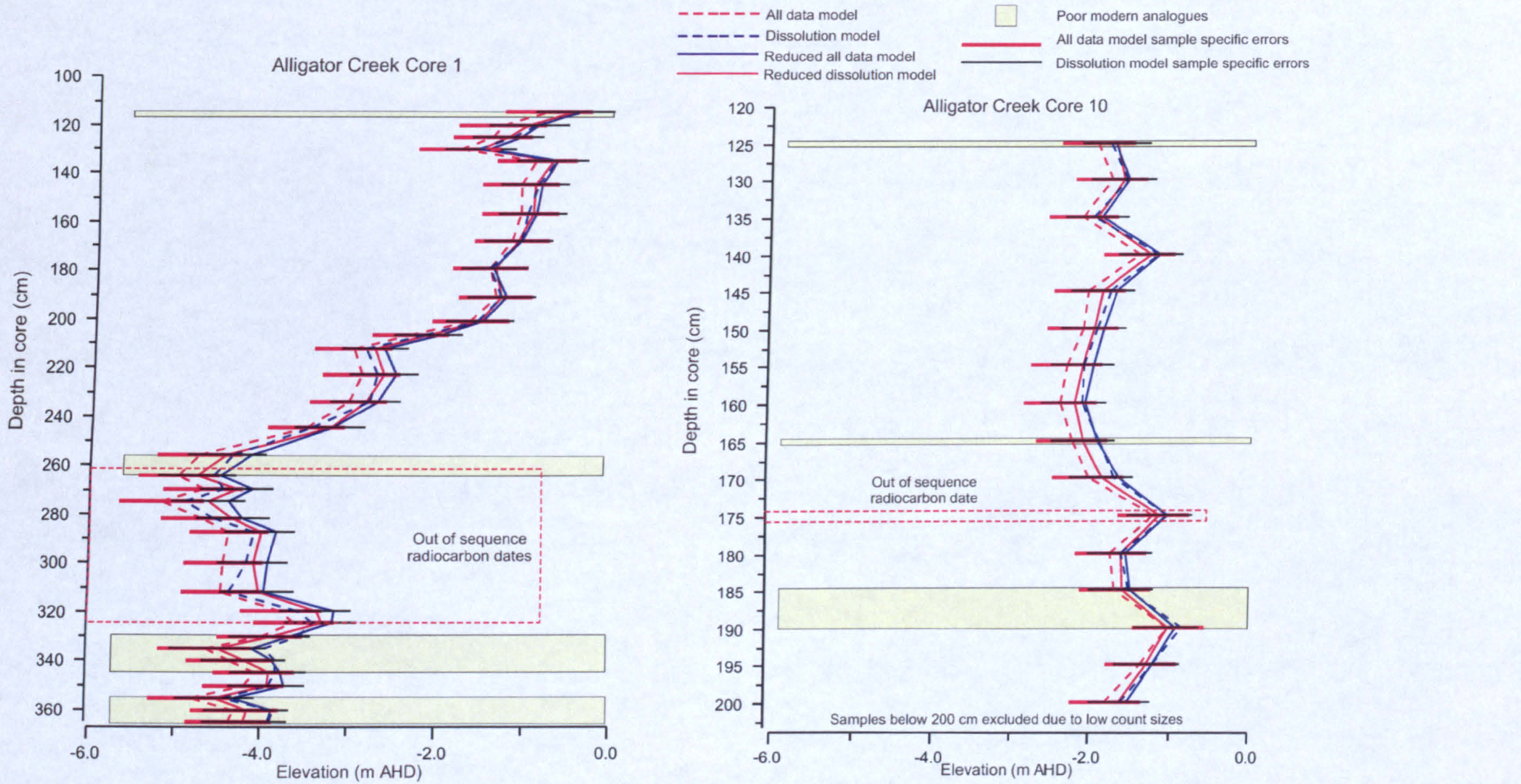


Figure 5.15b: Reconstructed palaeosurface elevations with all data model (dashed red line), reduced all data model (solid red line), dissolution model (dashed blue line) and reduced dissolution model (solid blue line) using WA-PLS component 3 for cores from Alligator Creek. Areas highlighted in yellow do not have modern analogues (Minimum dissimilarity coefficient above the largest minimum dissimilarity of samples in the modern training set). Error terms are sample specific bootstrapped reconstruction errors using all data model (red) and reduced all data model (black). Area within red dotted line refers to parts of the cores where there are radiocarbon age reversals.

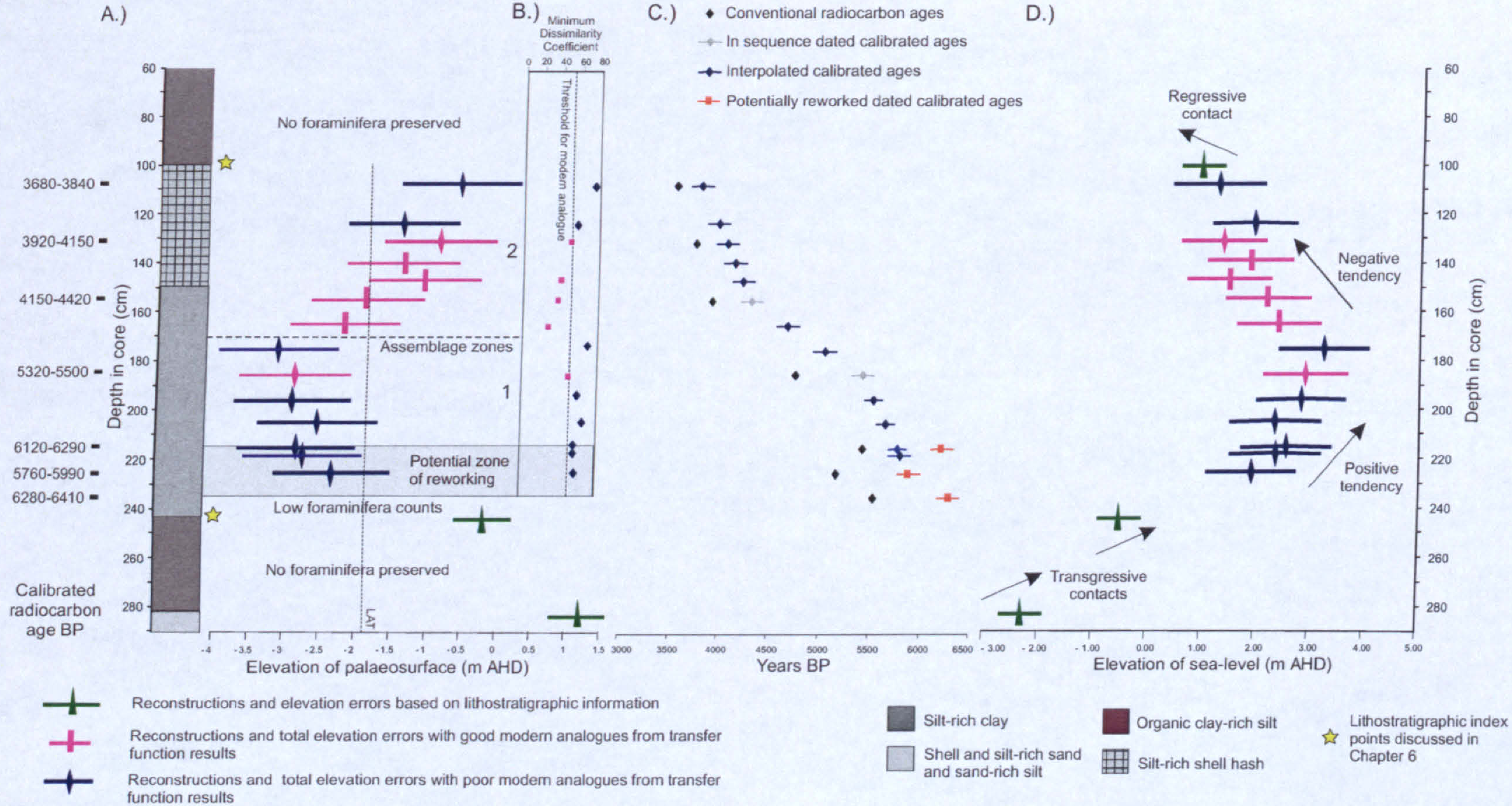


Figure 5.16 A.) Reconstructed palaeosurface elevations and total reconstruction errors for Cocoa Creek Core 7 using the reduced all data model and WA-PLS component 3. Reconstructions in blue have poor modern analogues, reconstructions in pink have good modern analogues (assessed using MAT). The assemblage zone boundary refers to the boundary between cluster analysis assemblage zones 1 and 2 identified in Figure 5.4 and Section 5.2.1. B.) MAT minimum dissimilarity coefficient values for each fossil sample with a transfer function reconstruction with threshold value for modern analogues using the largest minimum dissimilarity coefficient in the modern training set C.) Age model through the core using calibrated radiocarbon dates (see Table 5.2), dates showing age reversals are in yellow. D.) Reconstructed sea-level changes with total error terms and tendency information from qualitative and transfer function reconstructions through this core.

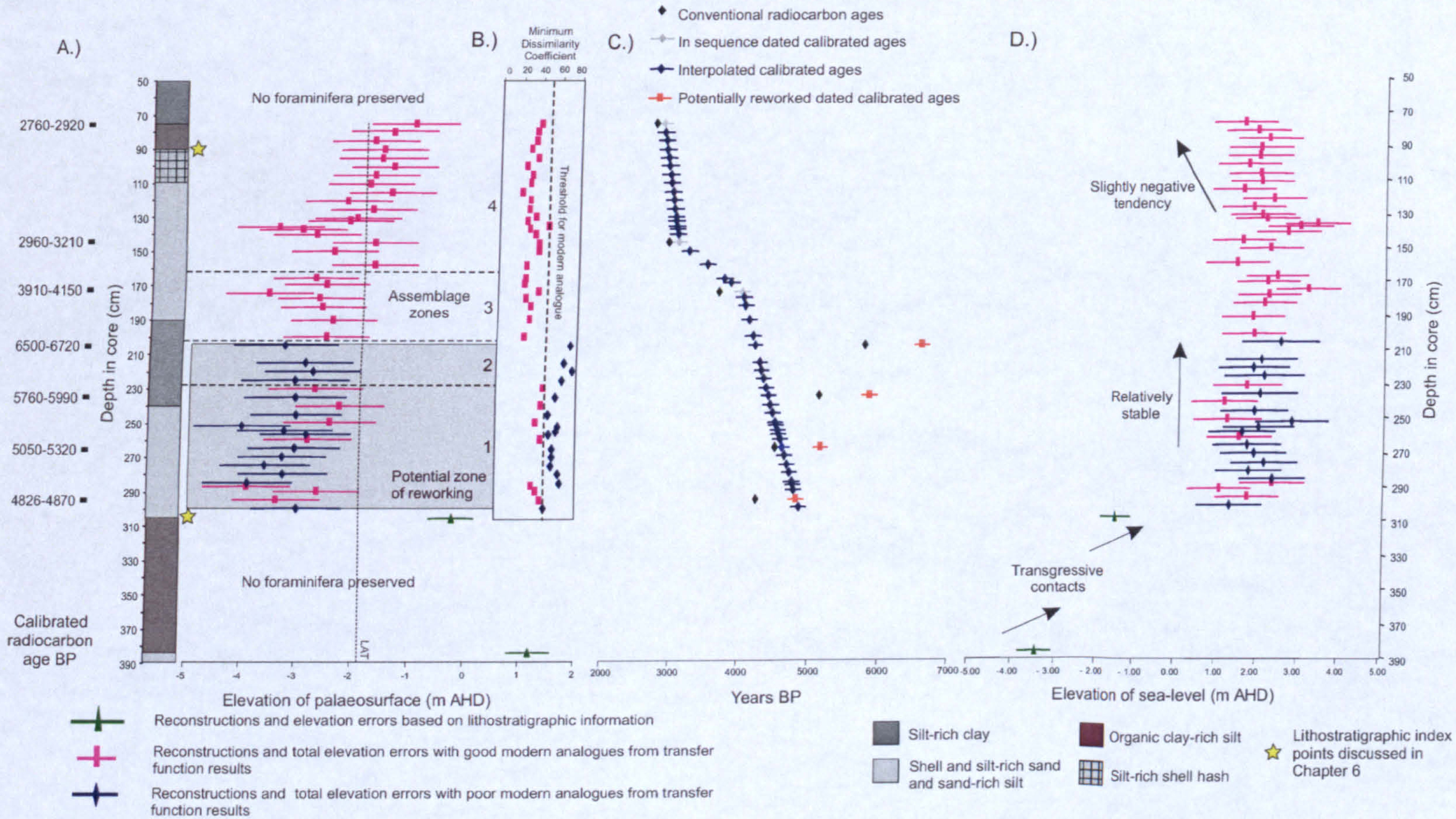


Figure 5.17 A.) Reconstructed palaeosurface elevations and total reconstruction errors for Cocoa Creek Core 14 using the reduced all data model and WA-PLS component 3. Reconstructions in blue have poor modern analogues, reconstructions in pink have good modern analogues (assessed using MAT). The assemblage zone boundaries refer to boundaries between cluster analysis assemblage zones identified in Figure 5.5 and Section 5.2.2. B.) MAT minimum dissimilarity coefficient values for each fossil sample with a transfer function reconstruction with threshold value for modern analogues using the largest minimum dissimilarity coefficient in the modern training set C.) Age model through the core using calibrated radiocarbon dates (see Table 5.4), calibrated ages showing reversals are in yellow. D.) Reconstructed sea-level changes with total error terms and tendency information from qualitative and transfer function reconstructions through this core.

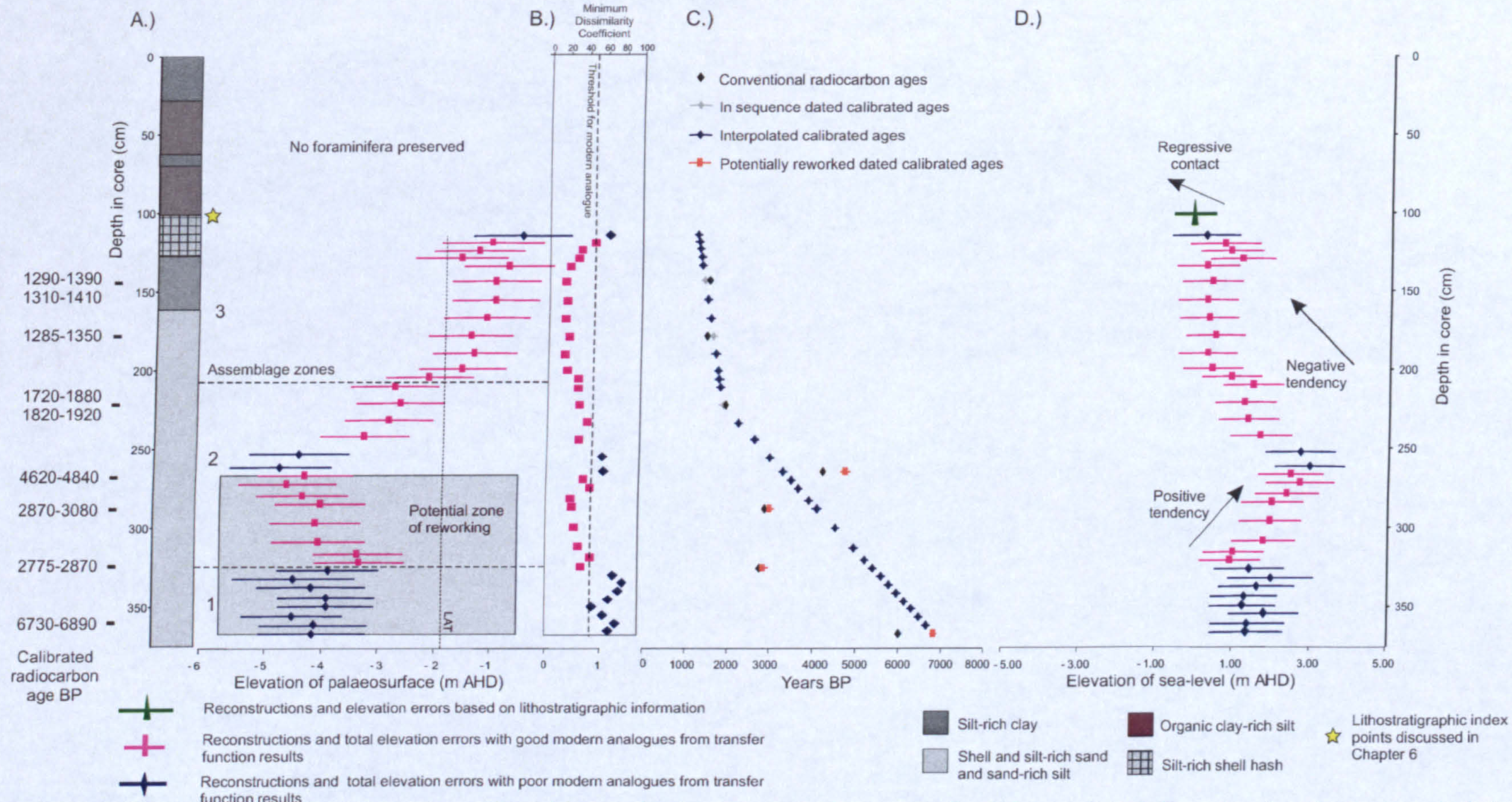


Figure 5.18 A.) Reconstructed palaeosurface elevations and total reconstruction errors for Alligator Creek Core 1 using the reduced all data model and WA-PLS component 3. Reconstructions in blue have poor modern analogues, reconstructions in pink have good modern analogues (assessed using MAT). The assemblage zone boundaries refer to boundaries between cluster analysis assemblage zones identified in Figure 5.8 and Section 5.2.3. B.) MAT minimum dissimilarity coefficient values for each fossil sample with a transfer function reconstruction with threshold value for modern analogues using the largest minimum dissimilarity coefficient in the modern training set C.) Age model through the core using calibrated radiocarbon dates (see Table 5.6), calibrated ages showing reversals are in yellow. D.) Reconstructed sea-level changes with total error terms and tendency information from qualitative and transfer function reconstructions through this core.

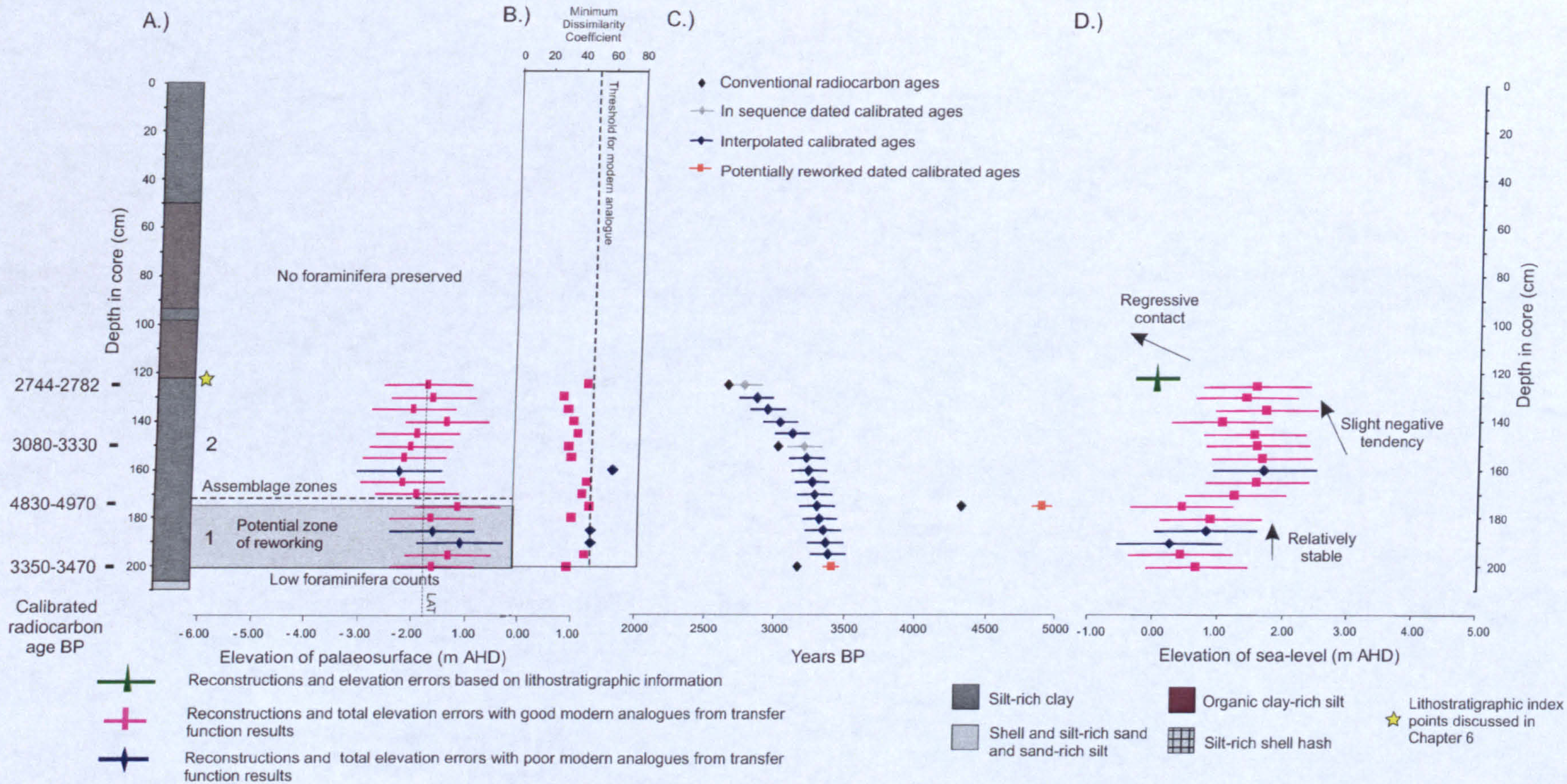
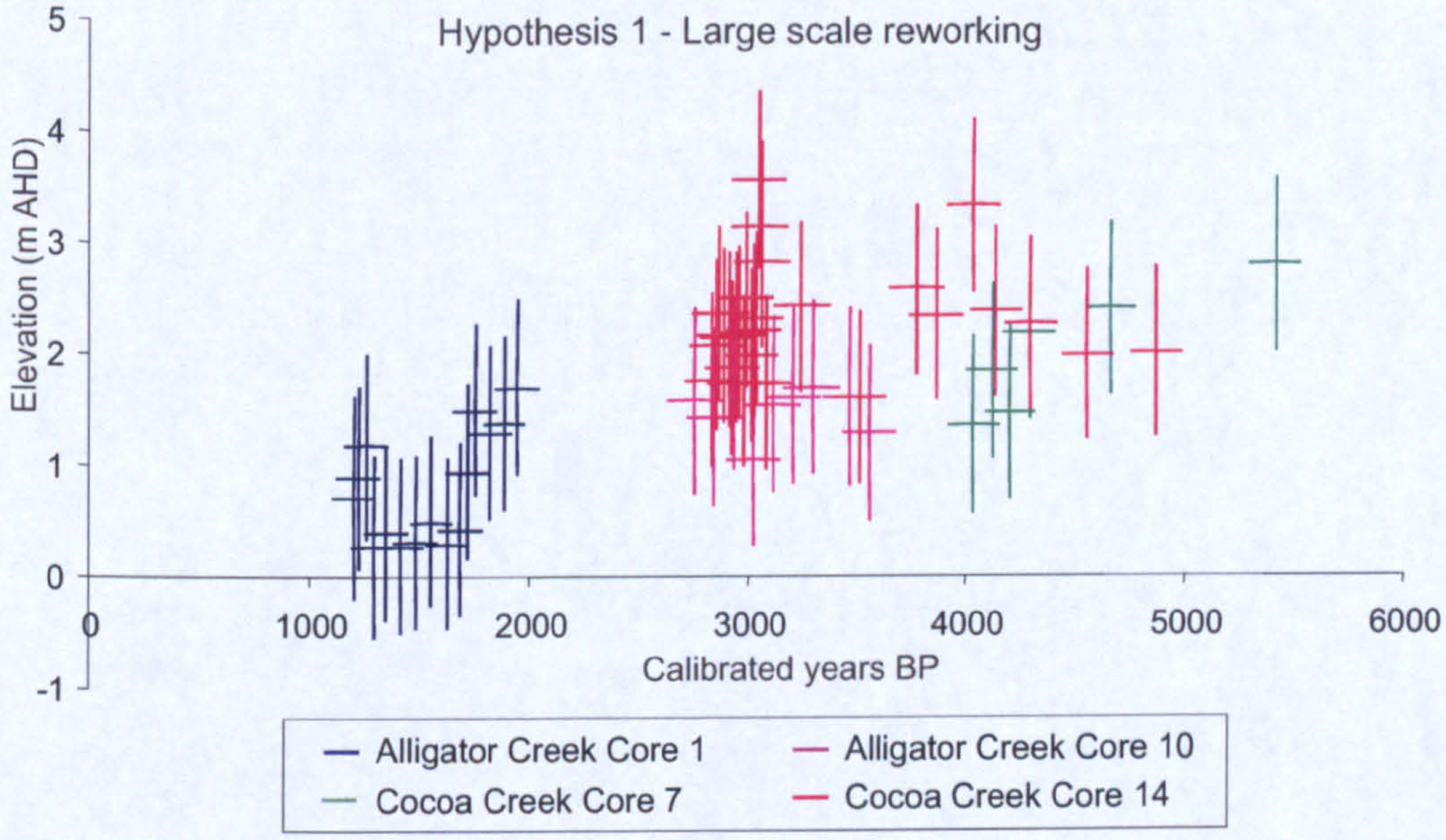


Figure 5.19 A.) Reconstructed palaeosurface elevations and total reconstruction errors for Alligator Creek Core 10 using the reduced all data model and WA-PLS component 3. Reconstructions in blue have poor modern analogues, reconstructions in pink have good modern analogues (assessed using MAT). The assemblage zone boundaries refer to boundaries between cluster analysis assemblage zones identified in Figure 5.9 and Section 5.2.4. B.) MAT minimum dissimilarity coefficient values for each fossil sample with a transfer function reconstruction with threshold value for modern analogues using the largest minimum dissimilarity coefficient in the modern training set C.) Age model through the core using calibrated radiocarbon dates (see Table 5.7), calibrated ages showing reversals are in yellow. D.) Reconstructed sea-level changes with total error terms and tendency information from qualitative and transfer function reconstructions through this core.

A.)



B.)

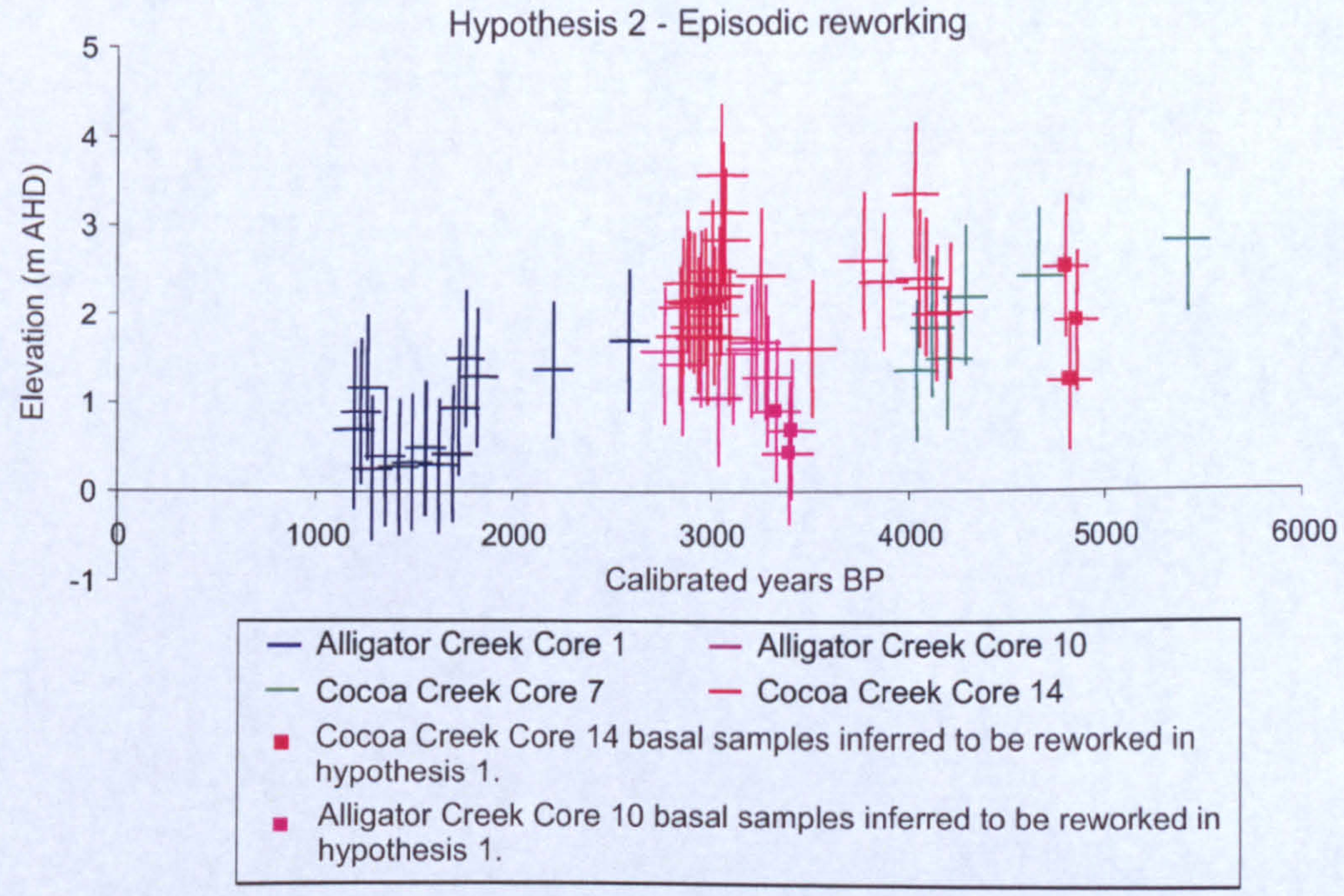


Figure 5.20: A.) Reconstructions using the model of large scale reworking which infers samples with in sequence dates at the base of cores are reworked (see Section 5.3). B.) New relative sea-level reconstructions for the past 6,000 calibrated years from Cleveland Bay using the model of episodic reworking which infers samples at the base of cores are not reworked if their ages are in sequence (see Section 5.3). Index points within circles are removed in the large-scale reworking model. Elevation errors are total error including transfer function model, modern and fossil sampling errors. Age errors are calibrated age ranges (2) (Bronk Ramsay 1995, Hughen *et al.* 2004), with the centre of the cross at median age.

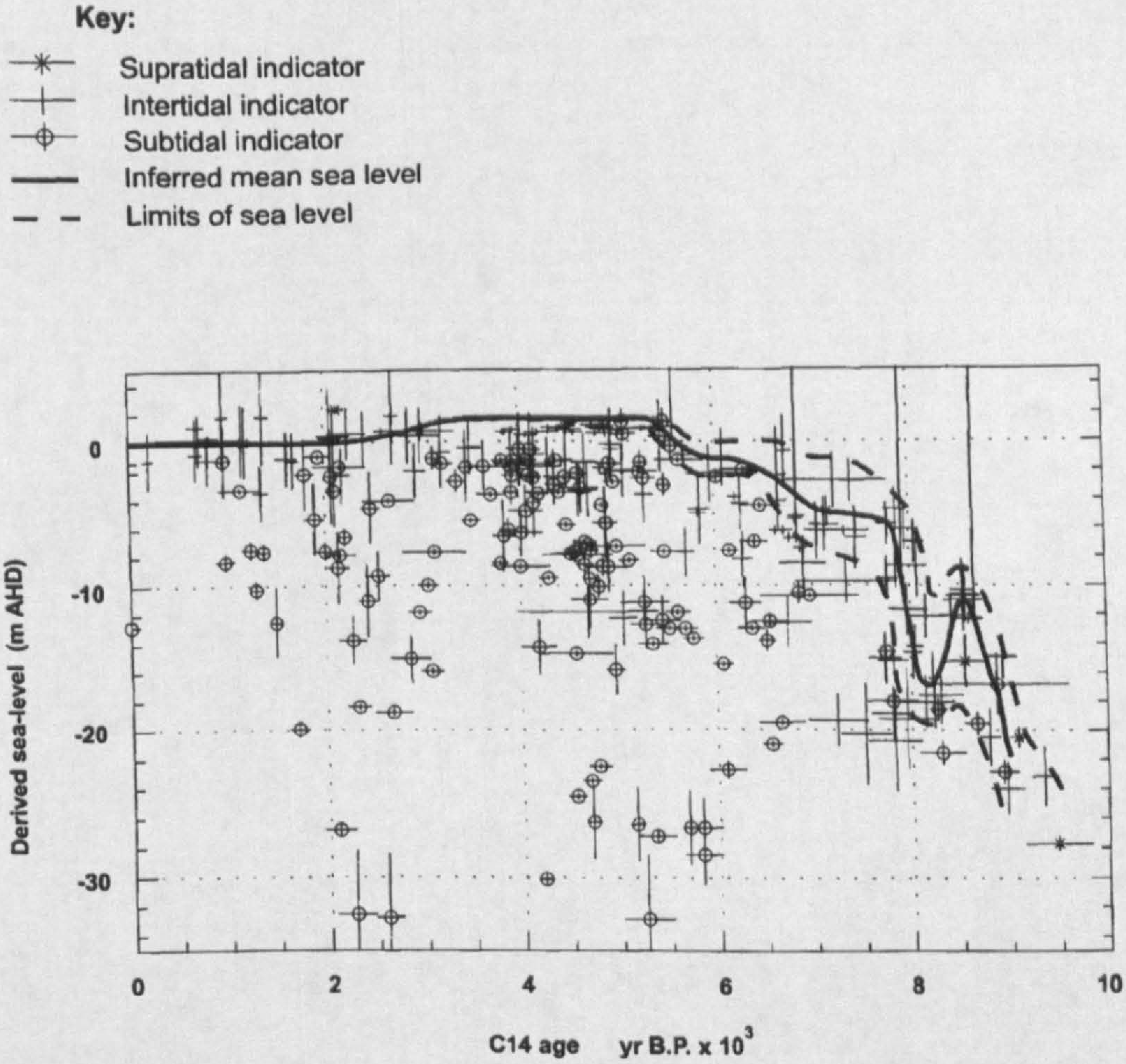


Figure 6.1: Holocene relative sea-level curve for the central Great Barrier Reef shoreline-inner shelf (Larcombe *et al.* 1995, Larcombe and Carter 1998). Index points are not corrected to the indicative meaning of each indicator, although inference is made about their environment of deposition through the key.

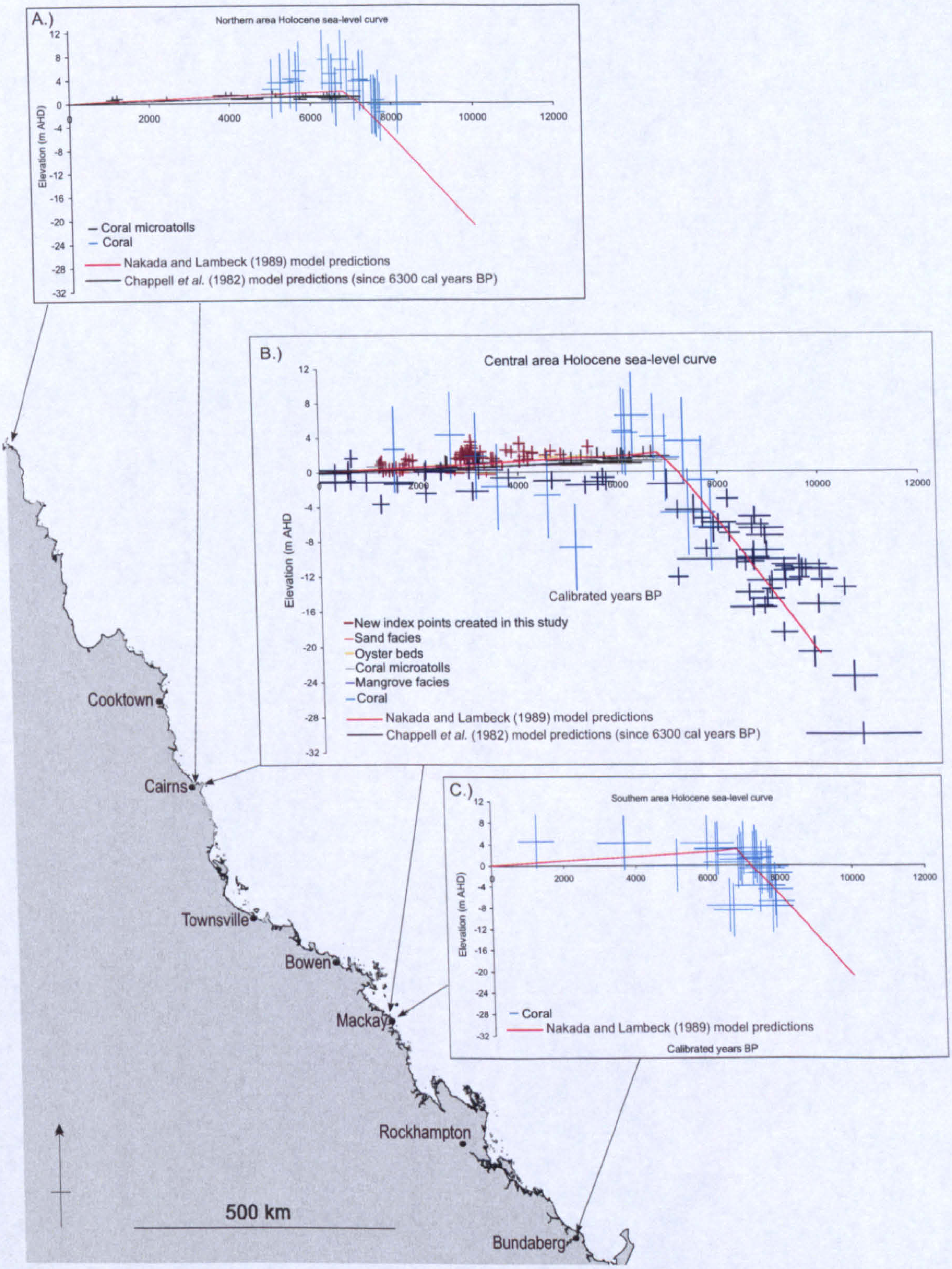


Figure 6.2: Recalibrated and new Holocene sea-level index points from 3 regions of northern Queensland. (a.) Northern area from Torres Strait to Cairns, (b.) Central area from Cairns to Mackay, (c.) Southern area from Mackay to Bundaberg. All ages are calibrated radiocarbon using Oxcal v.3.10 (Bronk Ramsey, 1995, Hughen *et al.* 2004) using 95% confidence limits. Horizontal error bars indicate maximum and minimum ages with the cross at median age. Vertical error bars are indicative range of each indicator. Also shown are geophysical model-predicted sea-level curves for each region from models by Nakada and Lambeck (1989) and Chappell *et al.* (1982) (Chappell model only covers north and central regions since 6300 cal years BP).

A.)

B.)

Figure 6.3: A.) Photograph of fossil coral micro atolls at Geoffrey Bay, Magnetic Island, B.) Photograph of fossil coral micro atolls on Orpheus Island, Palm Islands, Halifax Bay. This photograph shows how micro atolls can live in ponded water behind a rubble rampart and grow above their normal maximum tidal height (water level is roughly at Mid Tide Level when this photograph was taken).

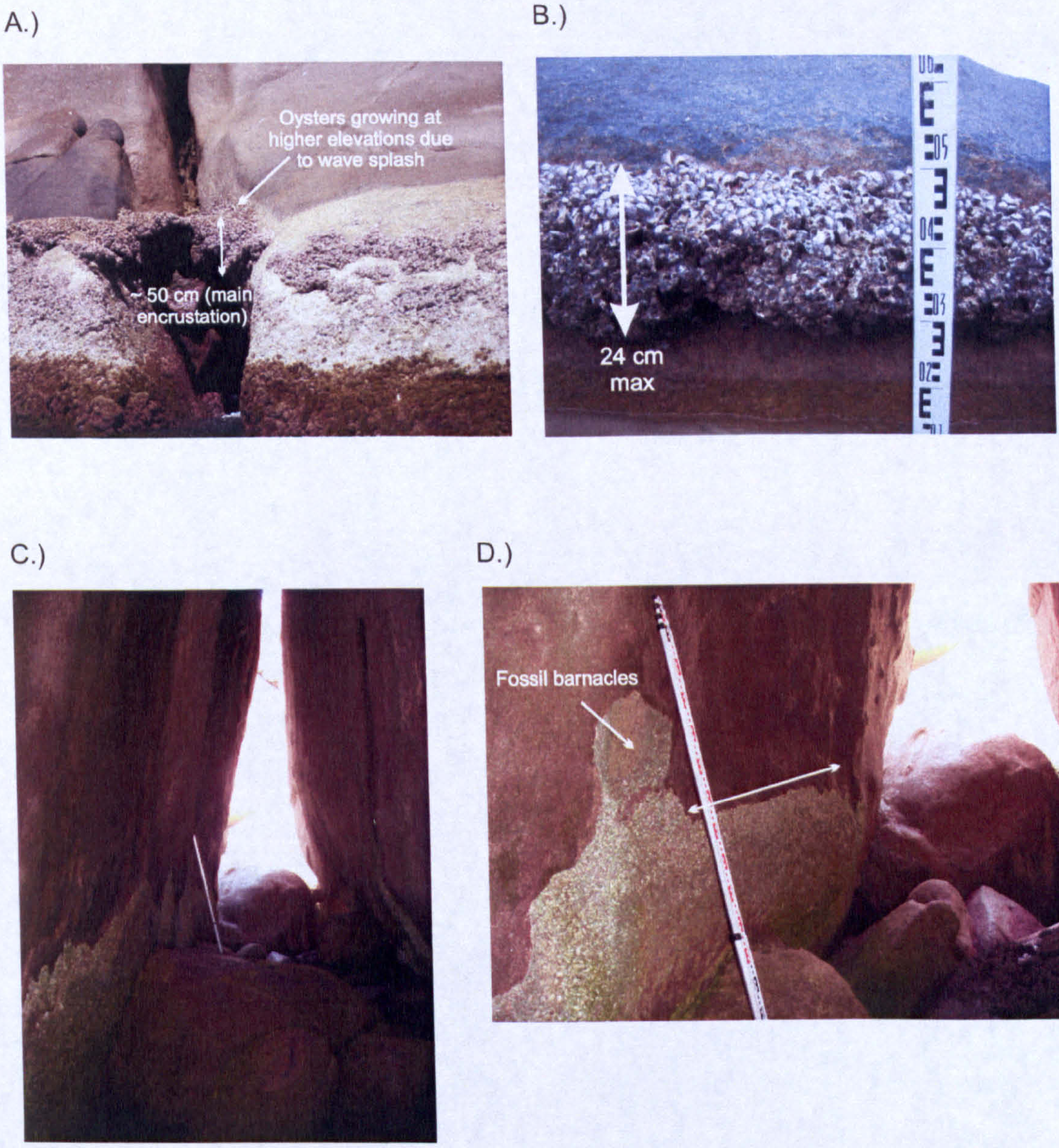
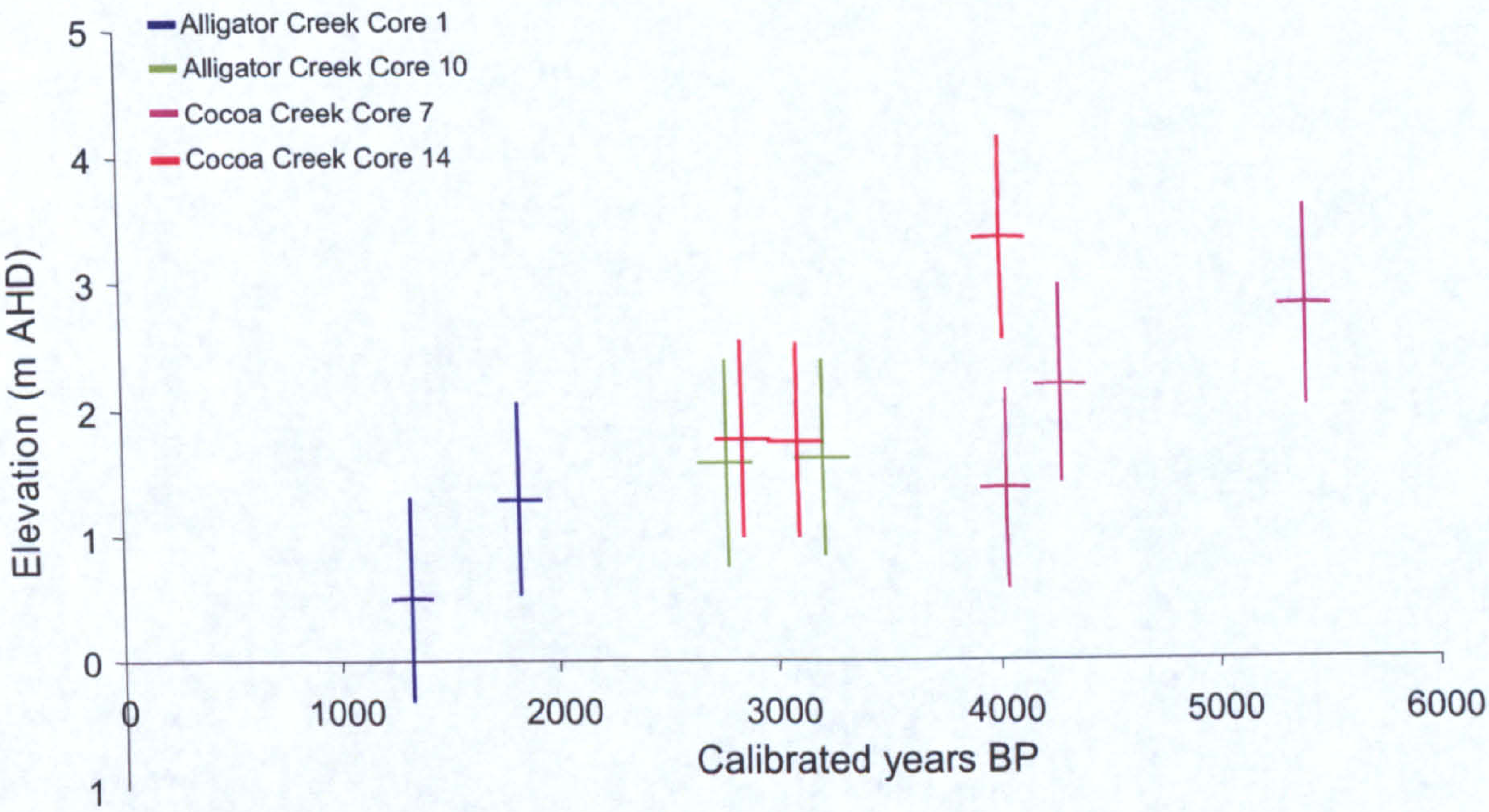


Figure 6.4 A.) Modern oyster beds at the mouth of a cave in turbid waters in Balding Bay off Magnetic Island, Cleveland Bay, north Queensland. B.) Modern oyster beds in a quiet water location in Balding Bay. C and D.) Fossil oyster beds within a cave in Balding Bay sampled by Beaman *et al.* 1994. They took samples for radiocarbon dating from the top of the oyster bed (marked with the horizontal arrow on D.), inferred to be maximum height of the fossil oyster encrustation.

Figure 6.5 A.) Relative sea-level reconstructions for the past 10,000 calibrated years from Cleveland Bay and Halifax Bay. Elevation errors for new cores are total error including transfer function model, modern and fossil sampling errors. Elevation errors for other studies are the estimated indicative range of each indicator used. Age errors for all index points are calibrated age ranges (2 σ) (Bronk Ramsay 1995, Hughen *et al.* 2004), with the centre of the cross at median age. The grey curve summarises the majority of reconstructions since 10,000 cal years BP. Also shown are geophysical model-predicted sea-level curves for each region from models by Nakada and Lambeck (1989) and Chappell *et al.* (1982) (Chappell model only covers the mid/late Holocene since 6300 cal years BP. B.) Sea-level reconstructions highlighting those from sand facies (Harvey *et al.* 2001) which sit below the summary curve and may be incorrect.

A.)



B.)

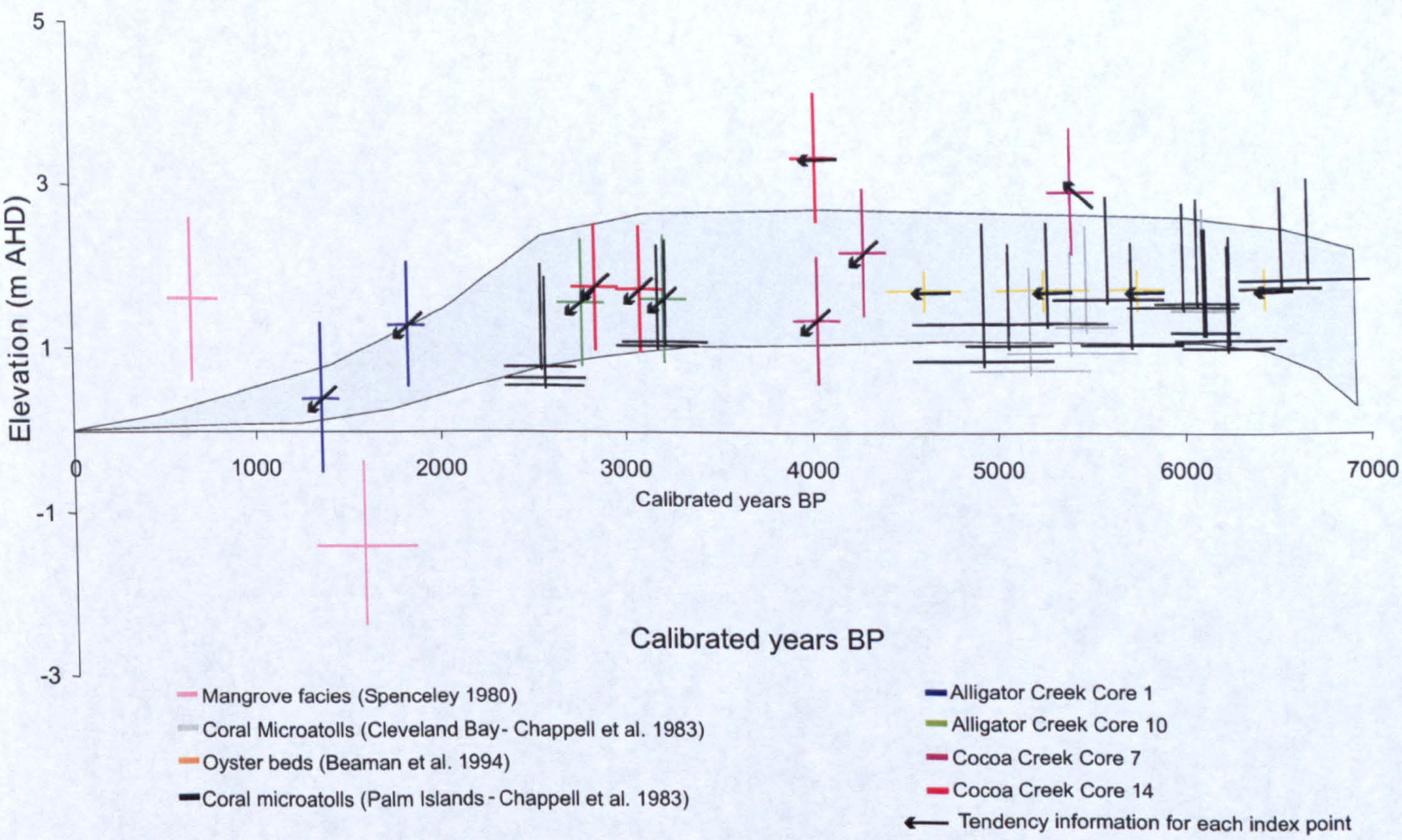


Figure 6.6: A.) Directly dated sea-level index points resulting from this study (excluding index points generated by interpolating ages between radiocarbon-dated sediment horizons). B.) Relative sea-level reconstructions for the past 7000 calibrated years from Cleveland and Halifax Bays with tendency information for each directly dated index point where this is available.

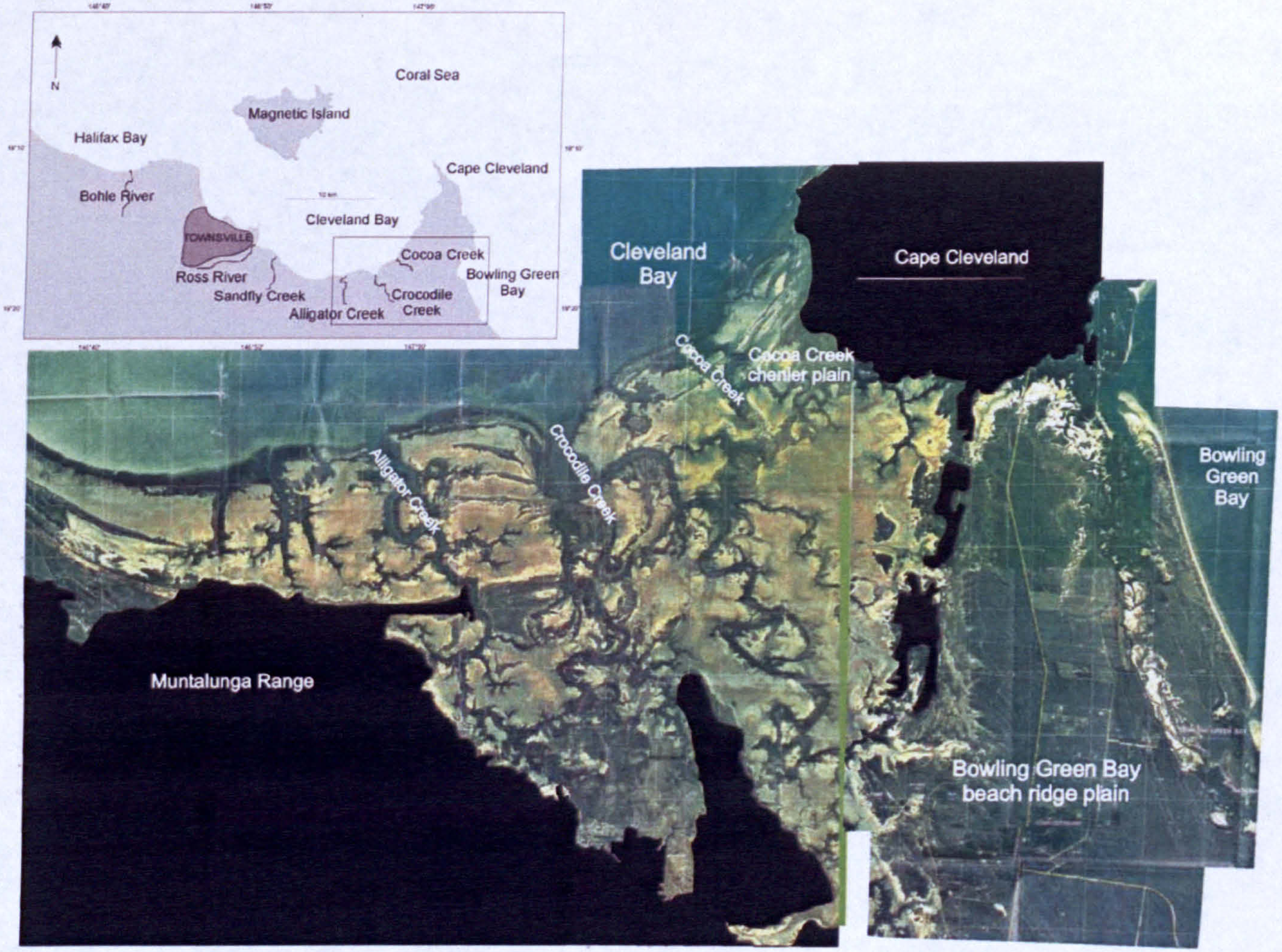


Figure 6.7: Coastal morphology at the height of the mid Holocene high stand, when relative sea-level was up to 2.5m above present. All areas coloured black are above the 2.5 m contour line. At the height of the high stand Cape Cleveland was periodically an island and Cleveland and Bowling Green Bays were joined during high tide.

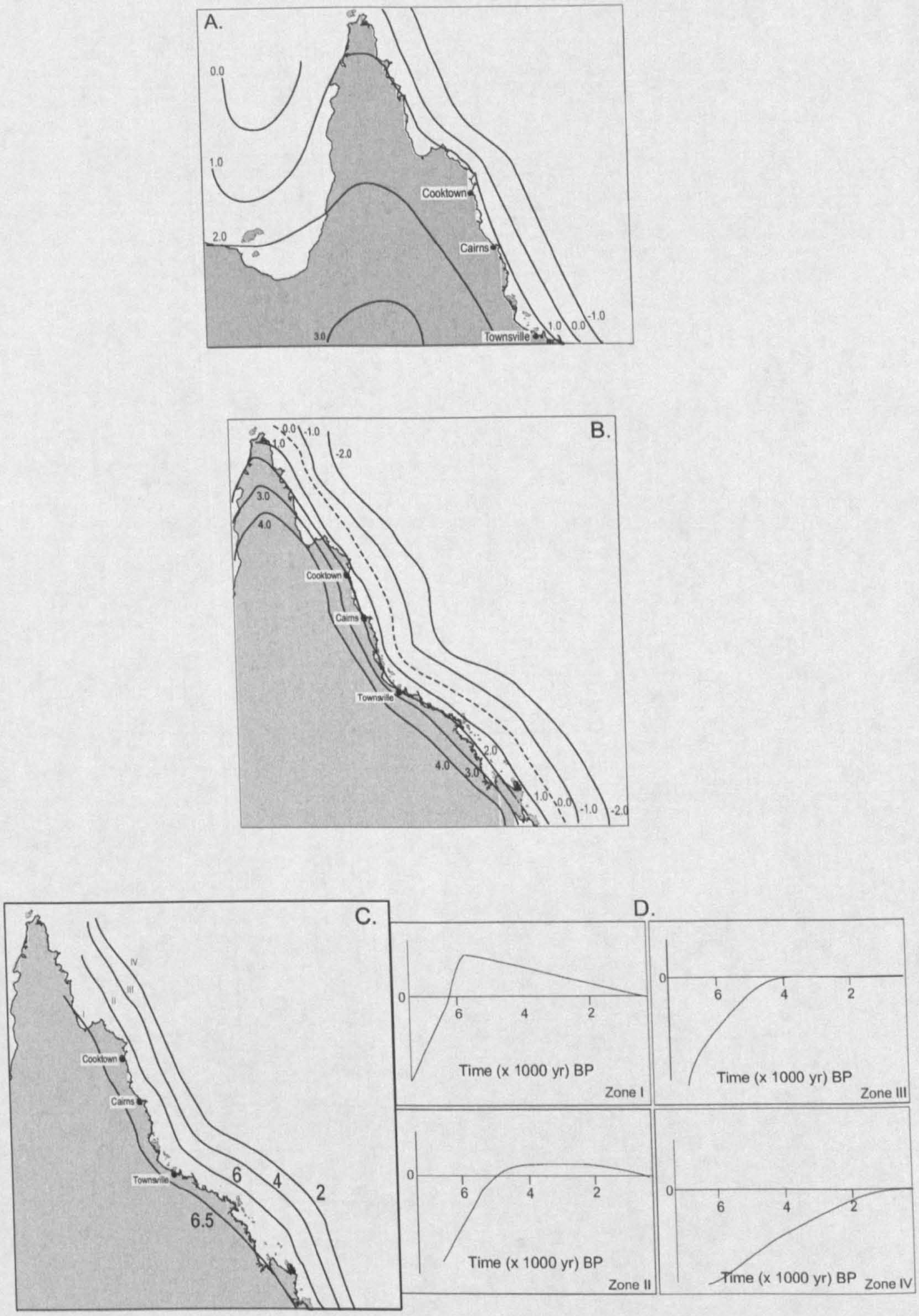


Figure 6.8 a.) Hydro-isostatic surface at 5500 radiocarbon (6300 cal) years BP predicted by Chappell *et al.* (1982), b.) Predicted sea level (in metres) at 6000 radiocarbon (6800 cal) years BP (Nakada and Lambeck 1989) c.) Time at which sea level first reached its present value (in 1000 radiocarbon years) and characteristic relative sea-level curves in the 4 zones in c.) (Nakada and Lambeck 1989).

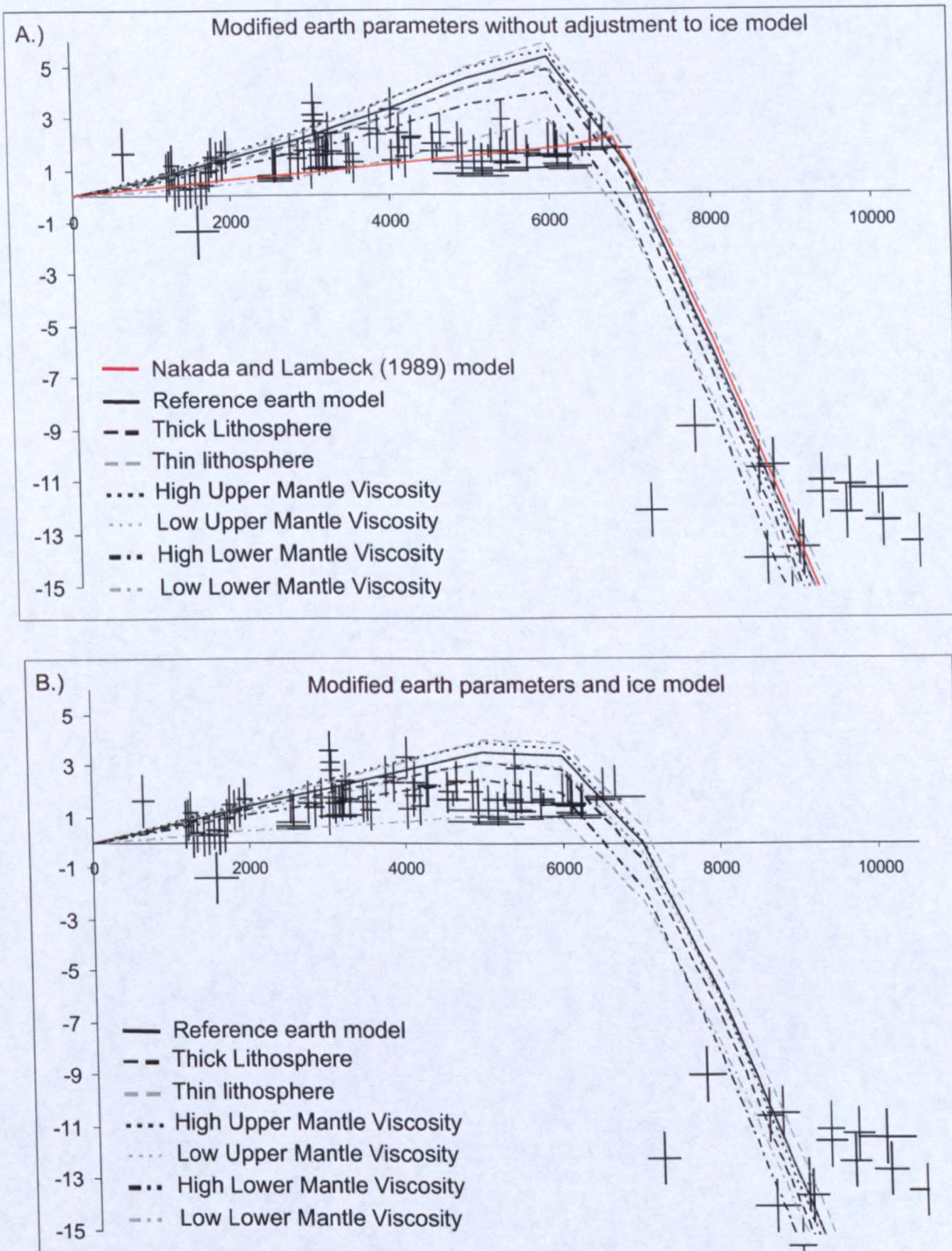


Figure 6.9: A.) Sea-level index points and sea-level predictions in Cleveland and Halifax Bays from Milne *et al.*'s (2005) geophysical model for a suite of seven earth models which sample a range of earth model parameters. Each pair of lines represent a prediction based on a model in which one parameter is varied in the reference model (see Table 6.4). Also on this figure is sea-level predictions by Nakada and Lambeck (1989) for Cleveland Bay. B.) For each earth model above, the modified ICE-3G ice model described in Section 6.2.4 is tuned using eustatic modifications by Shennan *et al.* (2006).

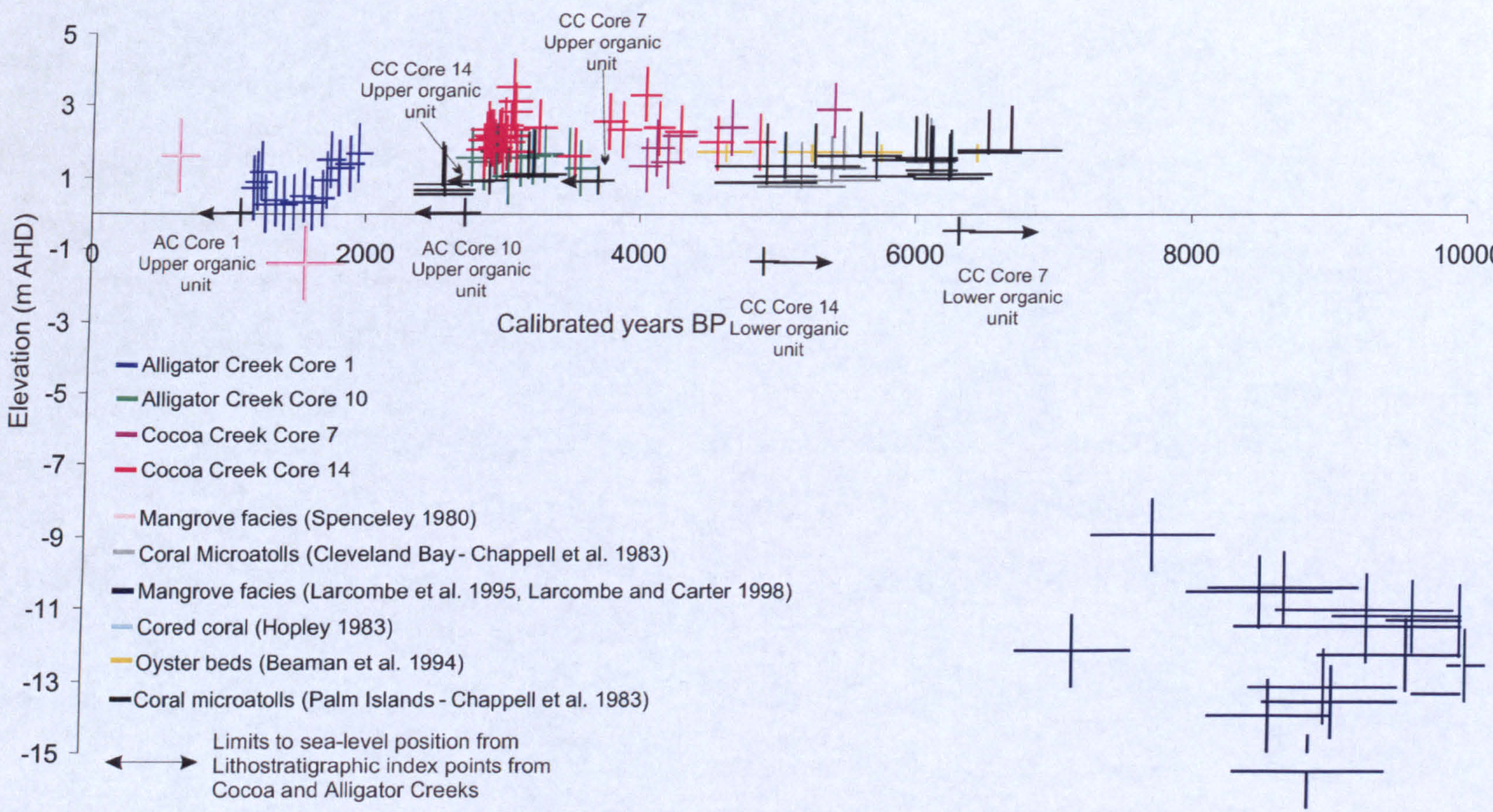


Figure 6.10: Relative sea-level reconstructions for the past 10,000 calibrated years from Cleveland Bay and Halifax Bay, with limiting sea-level index points from lithostratigraphic contacts in cores from Cocoa Creek (CC) and Alligator Creek (AC).

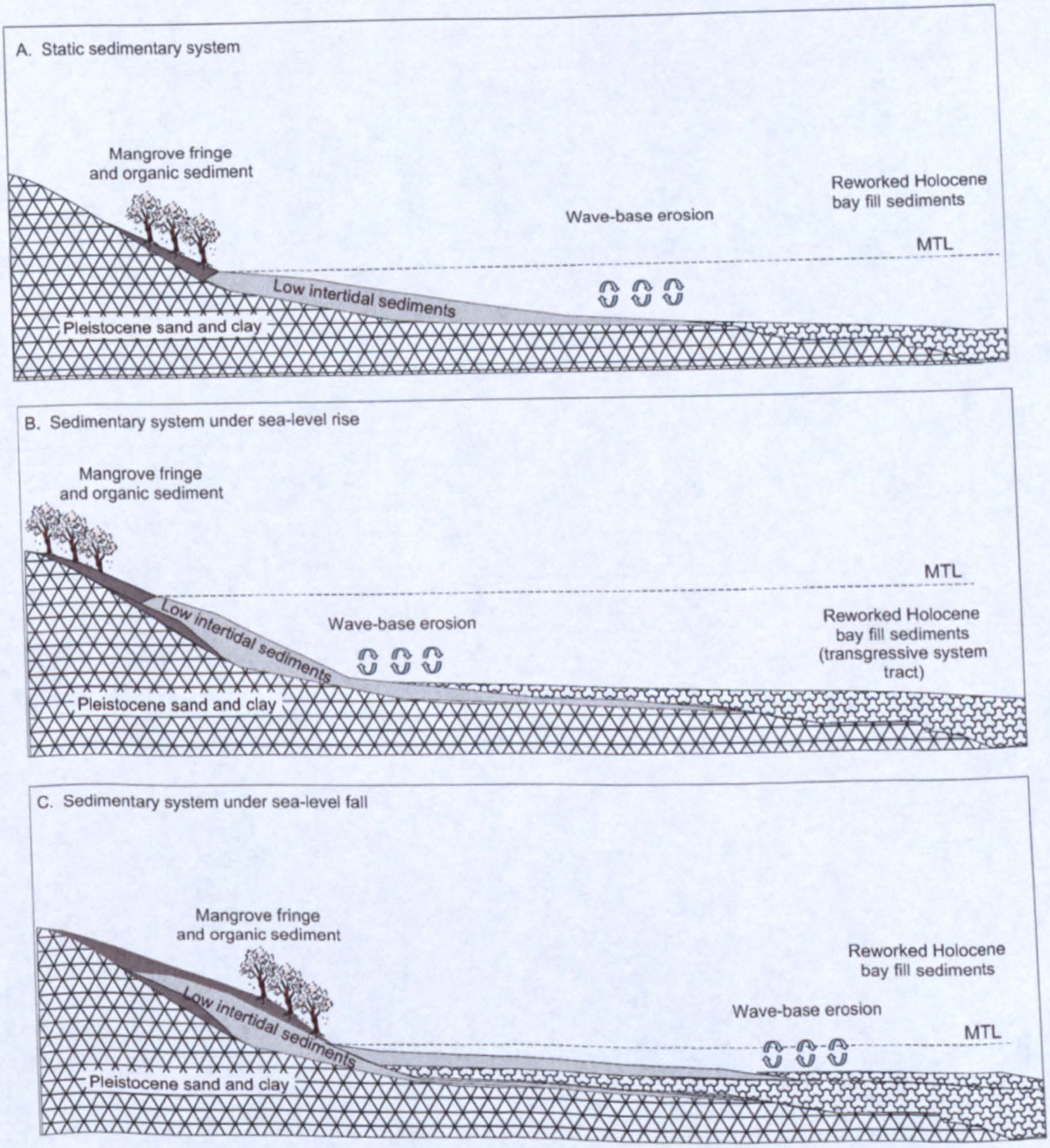


Figure 6.11: Idealised cross-section through an intertidal/marine transgressive and regressive complex, showing the formation of the transgressive and regressive system tract and potential reason for reworking of subtidal sediments within Cleveland Bay (after Larcombe and Carter 1998, Demarest and Kraft 1987).

Figure 6.12: A.) and B.) photographs of the coastline in the south eastern corner of Cleveland Bay showing fringing mangroves and large areas of intertidal mud flat exposed during a spring tide in June 2004, C.) and D.) Photographs of the sediment surface showing burrows created by fiddler crabs and molluscs in *Rhizophora stylosa* and *Ceriops* sp. Mangrove zones.

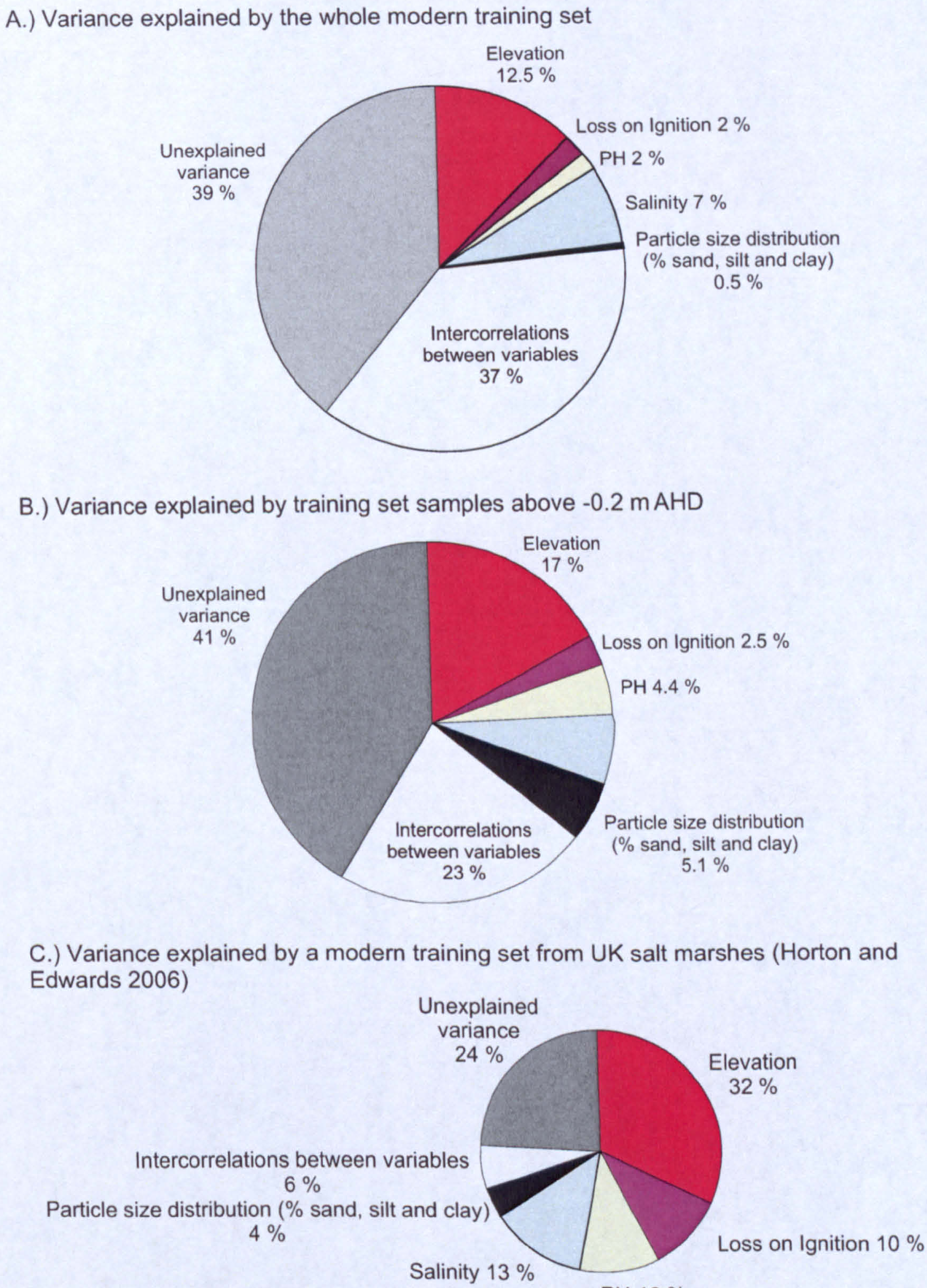


Figure 6.13: Pie charts showing variance in modern foraminiferal data from Cocoa Creek, Alligator Creek and Big Mango explained by the environmental variables investigated, A.) Using the whole modern training set, B.) Using training set samples from above -0.2 m Australian Height Datum (which is 30 cm below Mean Tide Level), C.) Variance in foraminiferal assemblages explained by environmental variables in a series of salt marshes in the UK (after Horton and Edwards 2006).

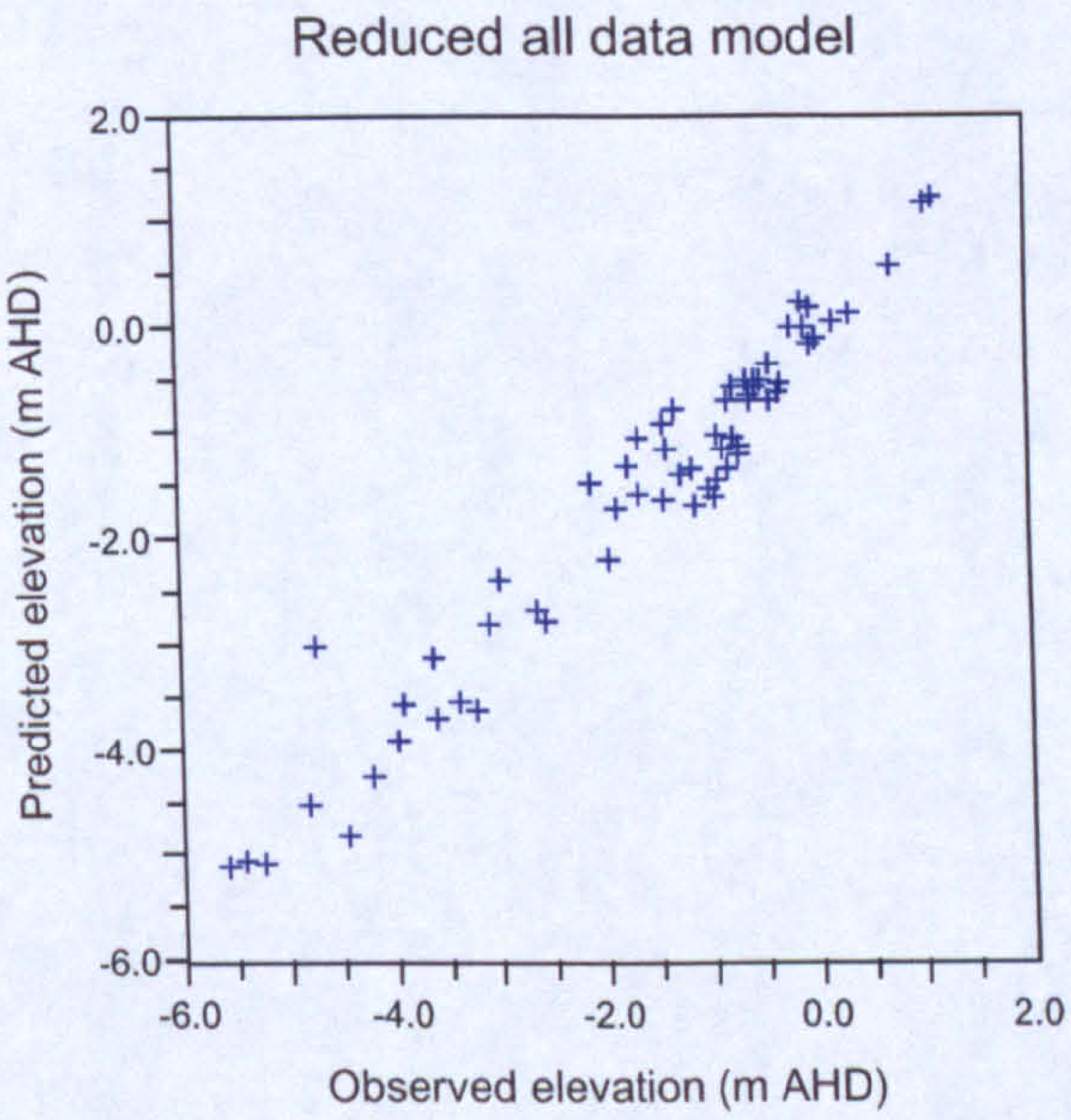


Figure 6.14: Regression results for the reduced all data model using WA PLS component 3.

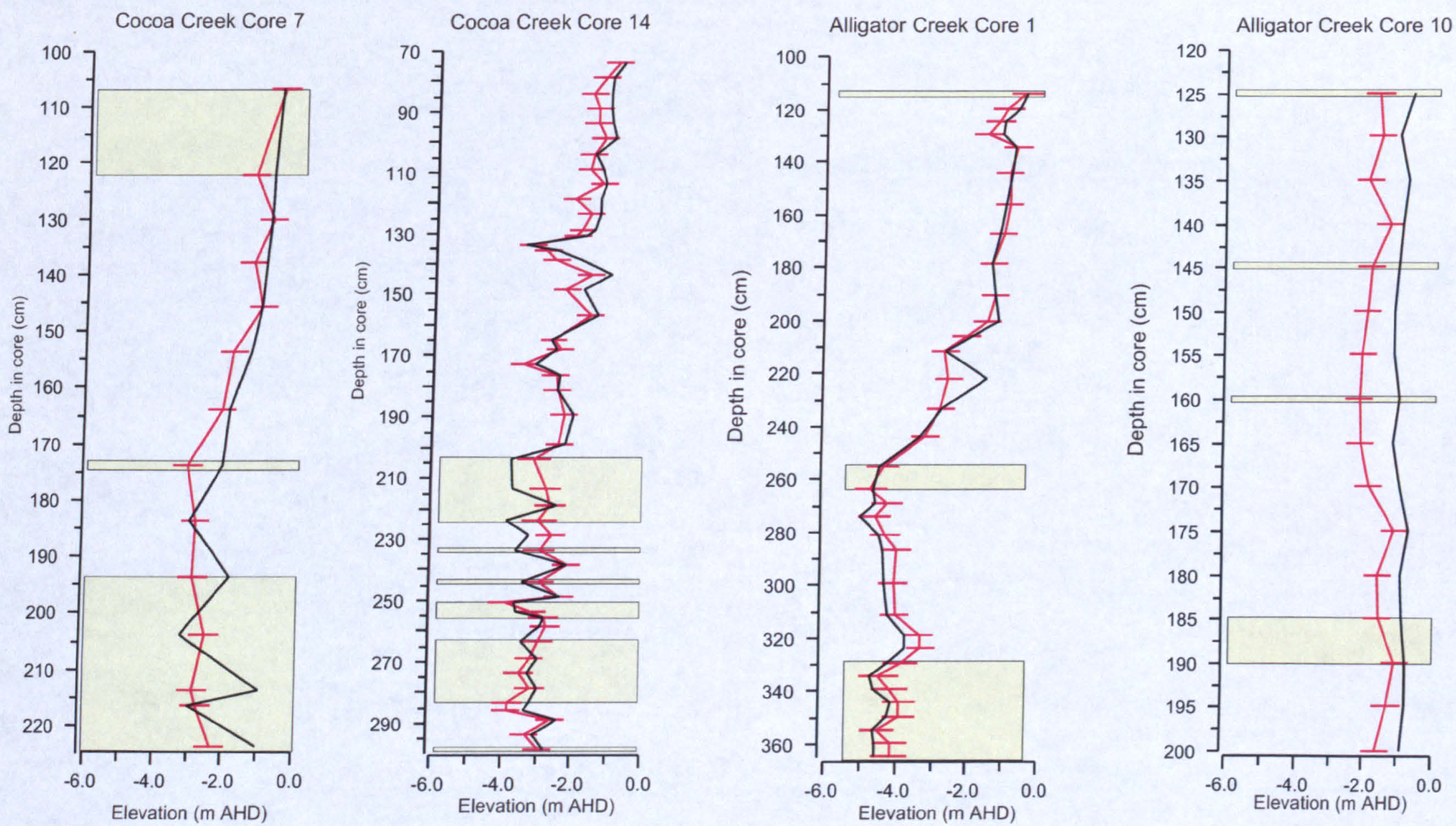
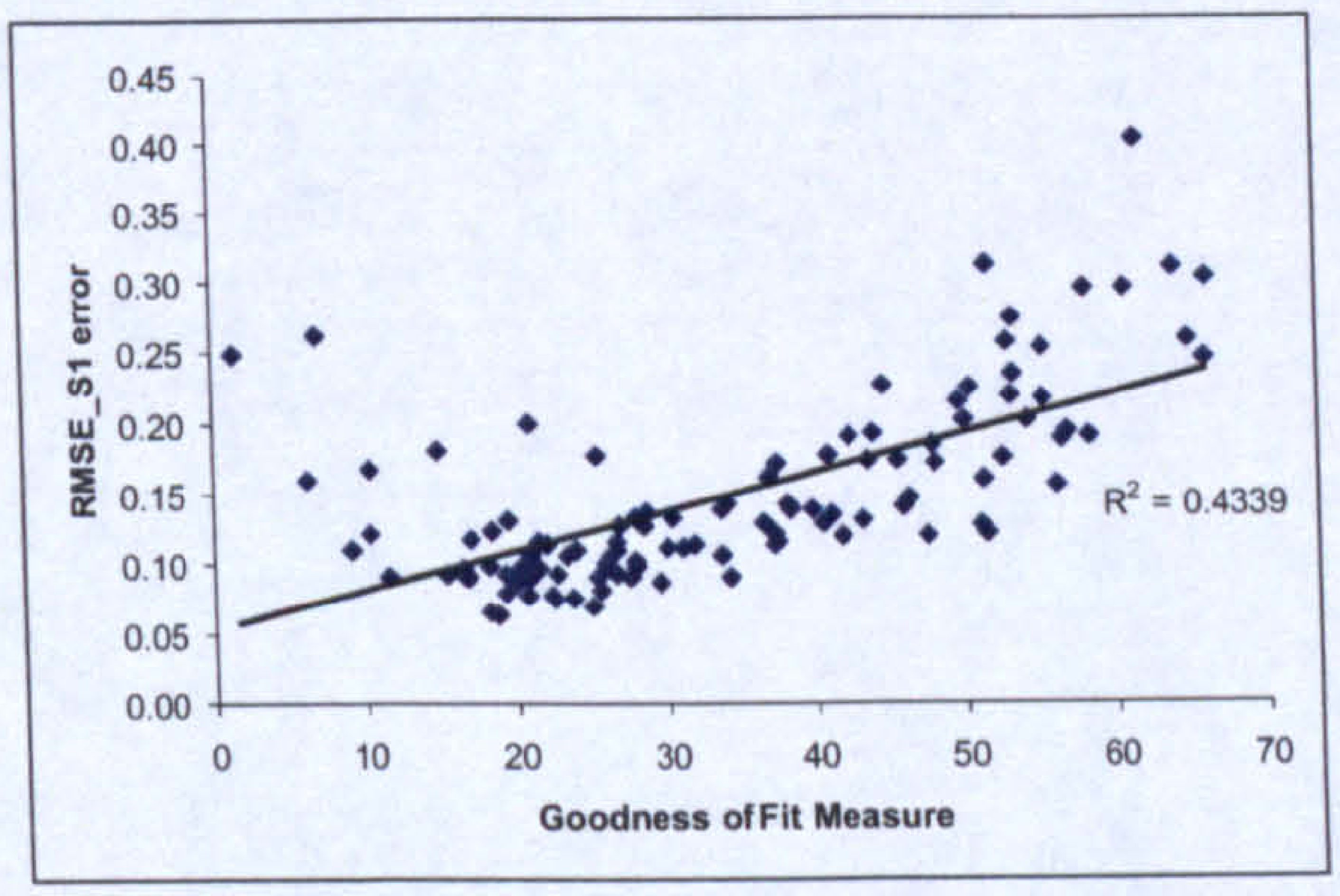
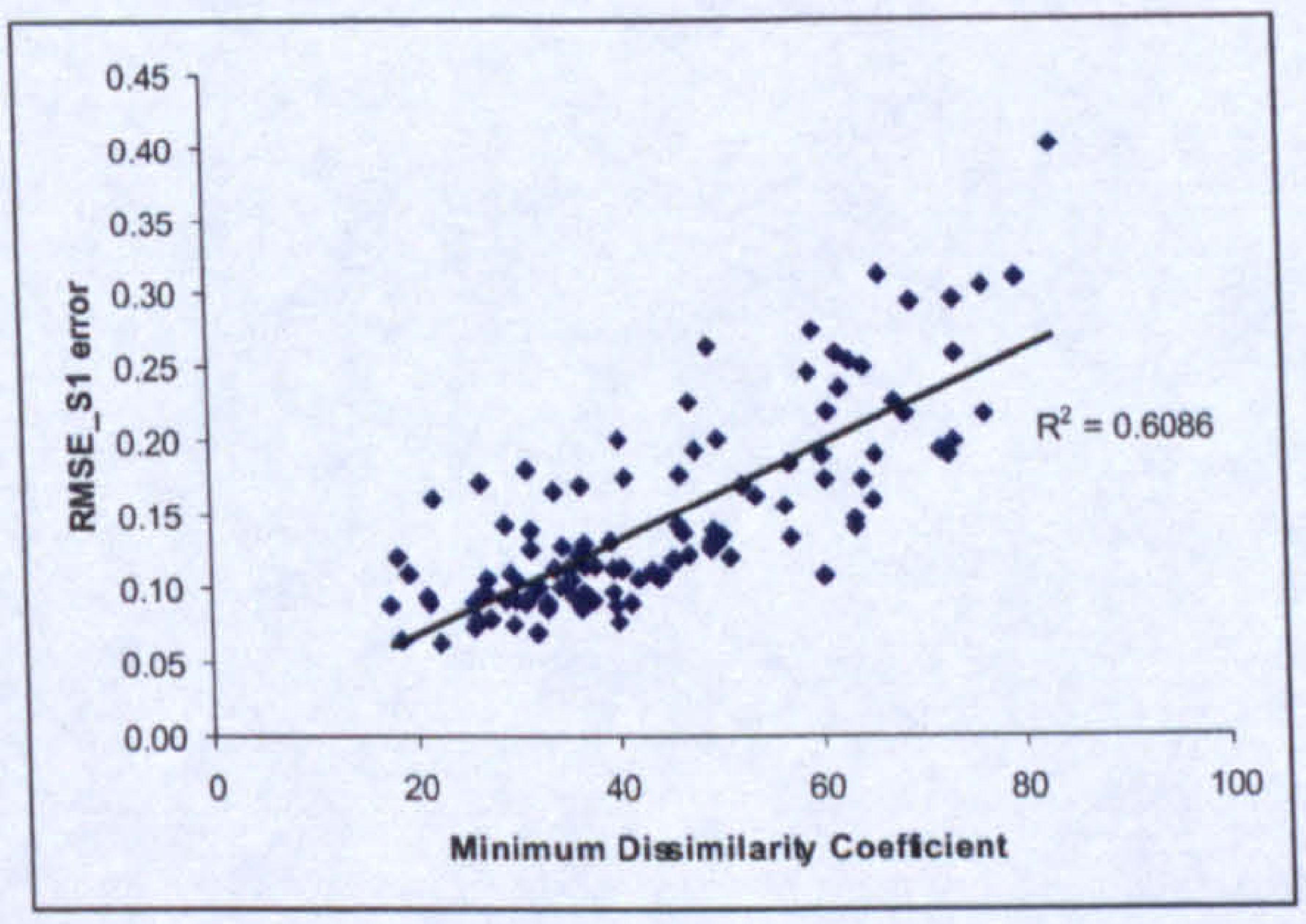


Figure 6.15: Reconstructed reference water levels with reduced all data model using Weighted Averaging - Partial Least Squares (red line) and Maximum Likelihood (black line). Error terms are 1 sigma total transfer function error terms using Weighted Averaging Partial Least Squares. Areas highlighted in yellow have poor modern analogues (Minimum dissimilarity coefficient above the largest minimum dissimilarity value in the modern training set).

A.)



B.)



C.)

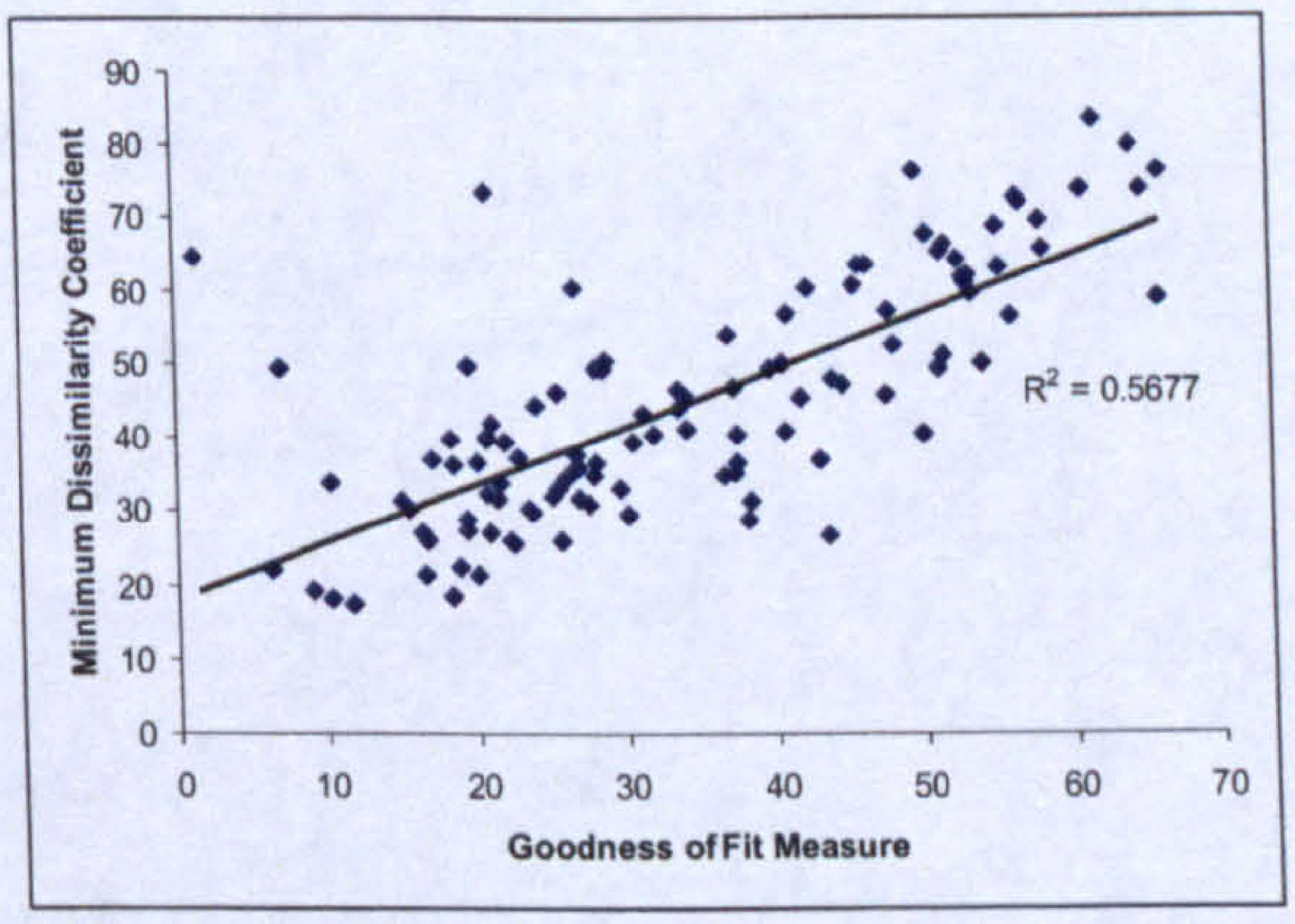
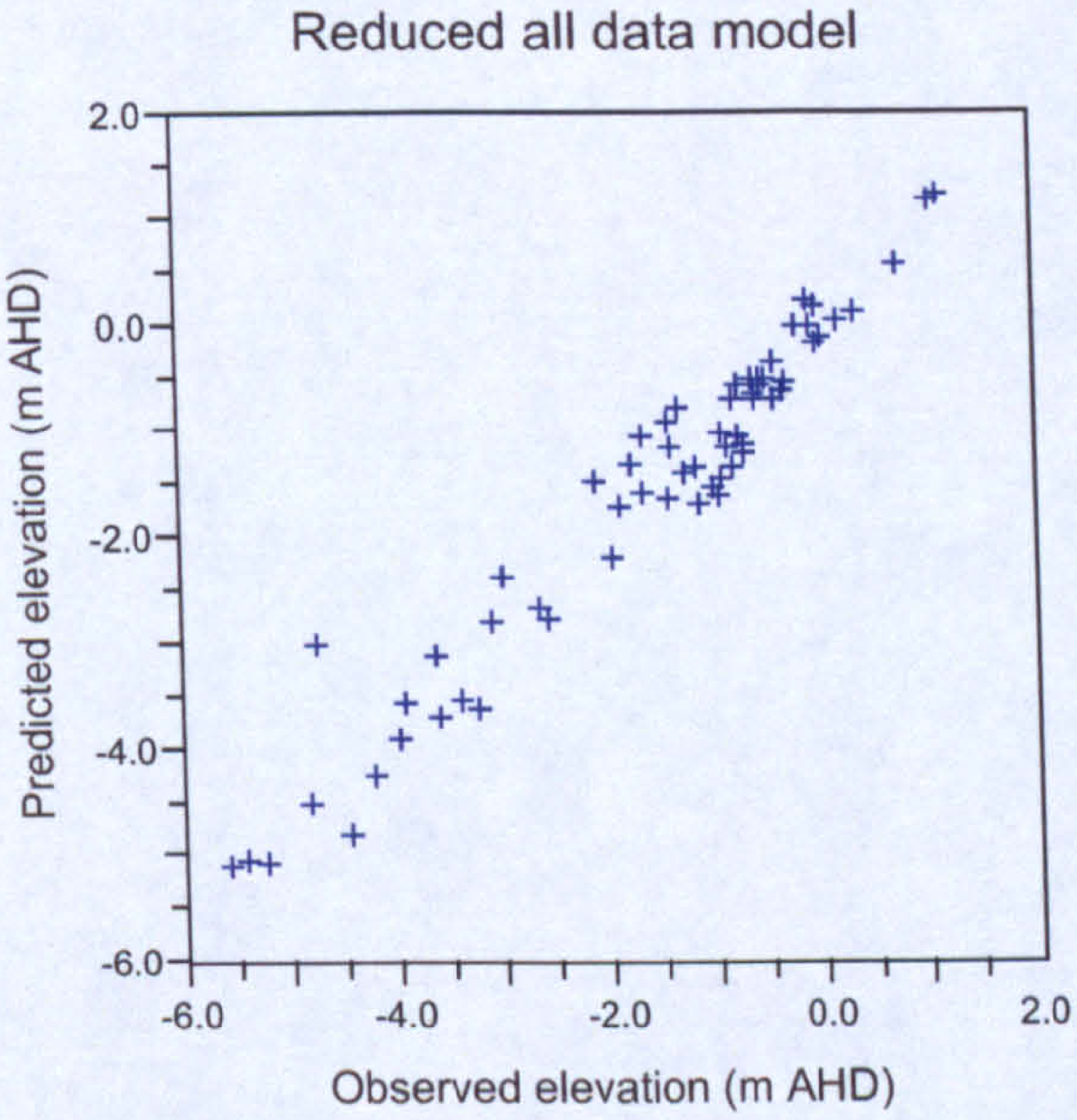


Figure 6.16: A.) Correlation between goodness of fit measure (10 %) and sample specific bootstrapped errors (RMSE_s1 error) B.) Correlation between minimum dissimilarity coefficient and sample specific bootstrapped errors (RMSE_s1 error) C.) Correlation between goodness of fit measure (10 %) and minimum dissimilarity coefficient.

A.)



B.)

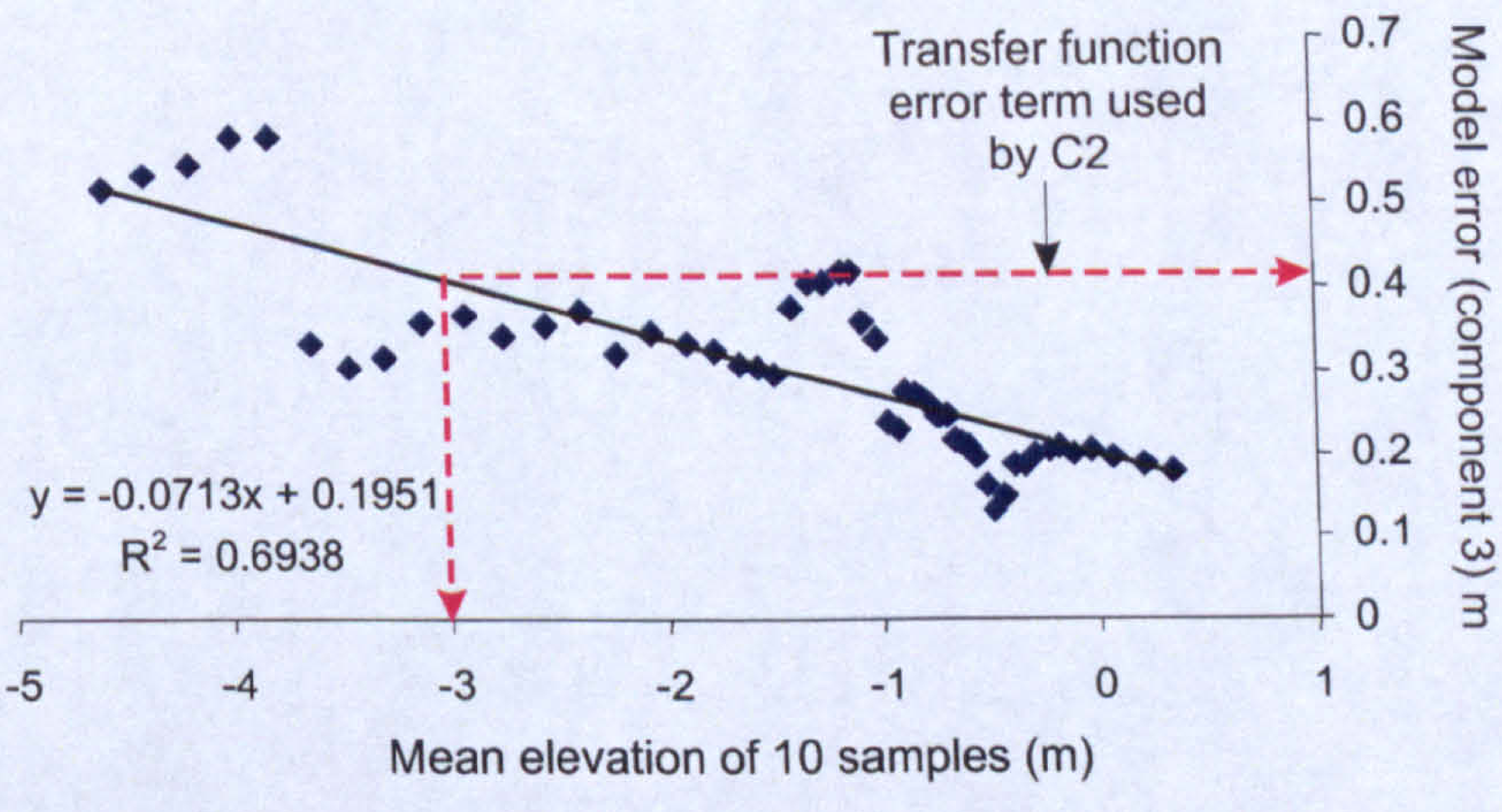


Figure 6.17: A.) Regression results for the reduced all data model using WA PLS component 3, B.) Changing magnitude (m) of regression residuals using a running mean of 10 modern samples and the linear trend line used to calculate magnitude of transfer function model error for fossil samples. The red arrow indicates the model error term used by the C2 program in calculating total transfer function error (Juggins 2003).

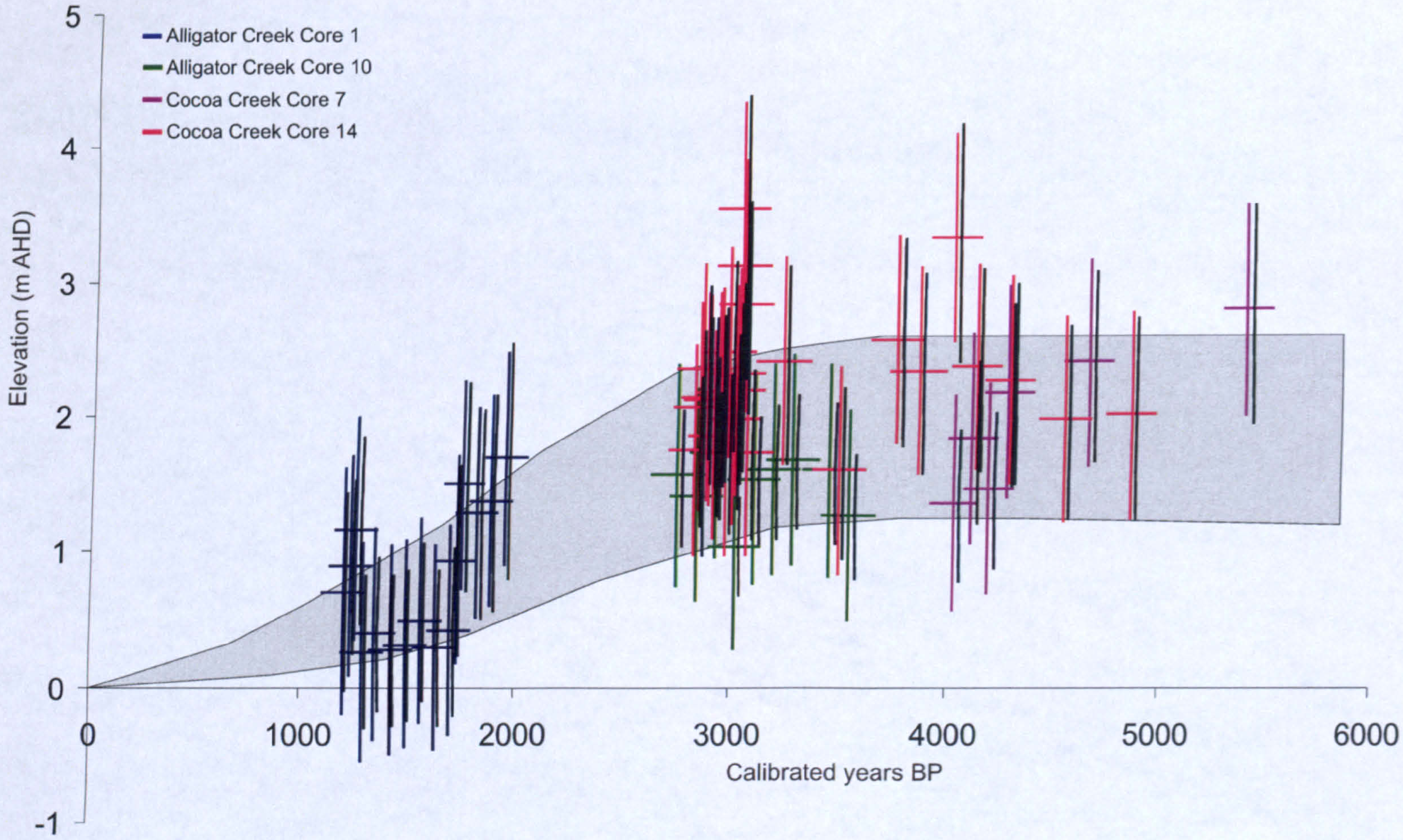


Figure 6.18: Relative sea-level reconstructions from cored sites in Cleveland Bay with 2 elevation errors per index point; total error including transfer function model error produced using the program C2 (colours) and total error including modified transfer function model error described in Section 6.5.3 (black). All elevation errors are total error terms including transfer function model, modern and fossil sampling errors. Age errors are calibrated age ranges, with centre of cross at median age. The grey curve summarises all reconstructions using C2 error terms since 5800 cal years BP (see Figure 6.5), indicating that revised error terms do not alter the summary reconstruction.


Plate 1
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Plate 2


Plate 3
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Plate 4

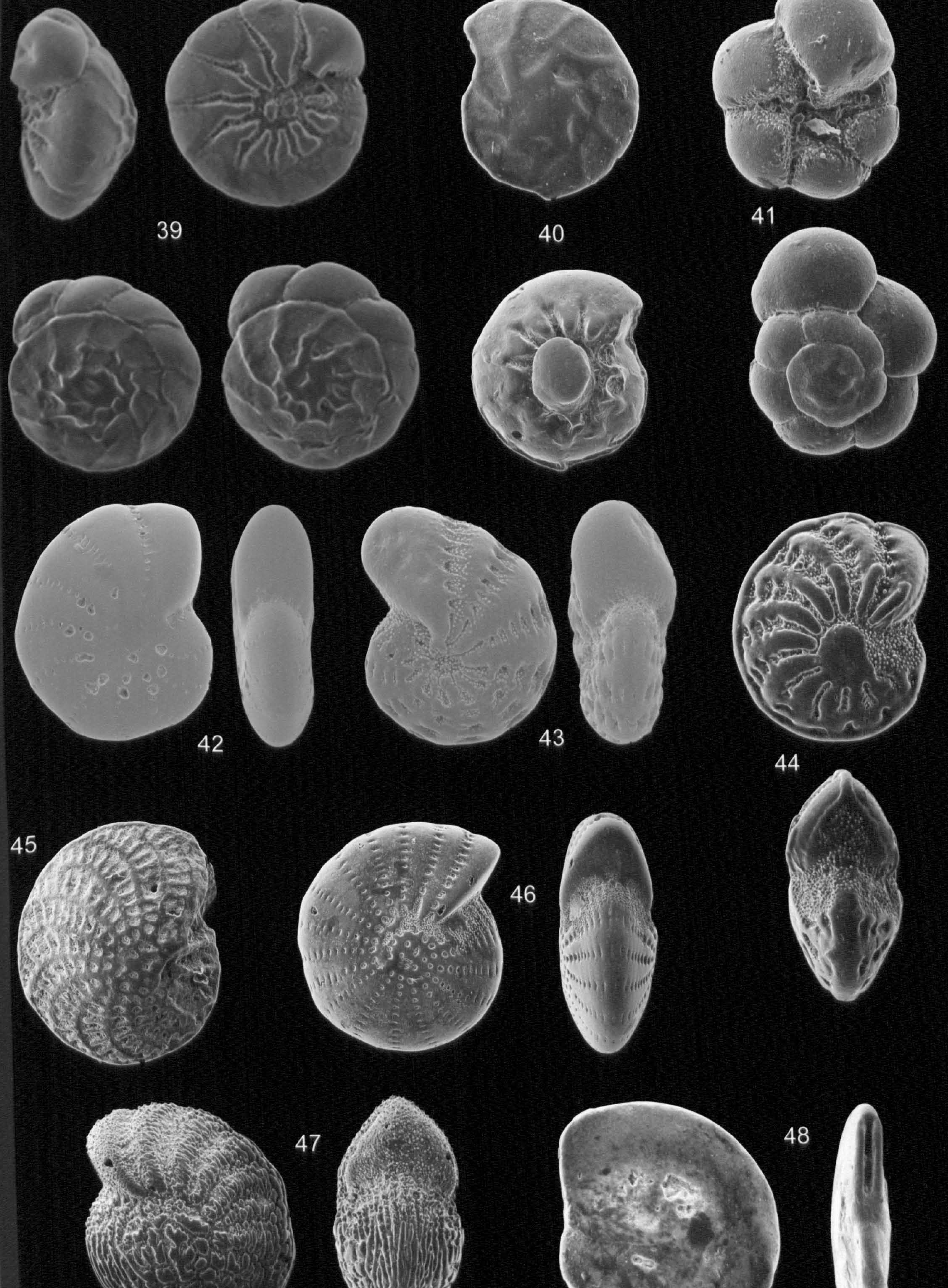

Table 1: Information on sea-level index points created from fossil foraminifera in this study (see Figures 5.16-5.19) (Sites are 1 – Cocoa Creek, 2 – Alligator Creek).

Site	Dated material	Core/ Sample reference	Elevation of sample (m AHD)	Laboratory Reference	^{14}C date (yr BP)	^{14}C age error (+/- yr)	Calibrated age range (2sigma) Max (yr)	Min (yr)	Median/ Interpolated age	Modern analogue present?	Palaeo-surface elevation (m AHD)	MSL (m AHD)	Total recon-struction error 2 sigma (+/- m)
1	Calcareous foraminifera	CC/7/107	0.66	SUERC-4753	3518	26	3840	3680	3760	No	-0.58	1.26	0.85
1	Linear interpolation	CC/7/123	0.51						3943	No	-1.40	1.92	0.78
1	Calcareous foraminifera	CC/7/131	0.43	SUERC-4754	3718	26	4150	3920	4035	Yes	-0.88	1.36	0.80
1	Linear interpolation	CC/7/139	0.35						4117	Yes	-1.39	1.84	0.78
1	Linear interpolation	CC/7/146	0.27						4200	Yes	-1.10	1.47	0.79
1	Calcareous foraminifera	CC/7/155	0.19	SUERC-4755	3892	23	4420	4150	4285	Yes	-1.89	2.19	0.79
1	Linear interpolation	CC/7/165	0.09						4660	Yes	-2.19	2.40	0.77
1	Linear interpolation	CC/7/175	-0.01						5035	No	-3.12	3.23	0.84
1	Linear interpolation	CC/7/185	-0.11	SUERC-4757	4748	27	5500	5320	5410	Yes	-2.88	2.79	0.79
1	Calcareous foraminifera	CC/7/195	-0.21						5526	No	-2.91	2.82	0.82
1	Linear interpolation	CC/7/205	-0.31						5643	No	-2.55	2.36	0.84
1	Calcareous foraminifera	CC/7/215	-0.41	SUERC-5575	5428	28	6290	6120	5759	No	-2.84	2.55	0.84
1	Linear interpolation	CC/7/217	-0.44						5789	No	-2.75	2.36	0.84
1	Calcareous foraminifera	CC/7/225	-0.51	SUERC-6253	5161	27	5990	5760	5875	No	-2.33	1.92	0.82
1	Calcareous foraminifera	CC/7/235	-0.61	SUERC-5576	5537	31	6410	6280	6345	Age only			
1	Calcareous foraminifera	CC/14/75	0.78	SUERC-5577	2734	29	2920	2760	2840	Yes	-0.97	1.75	0.78
1	Linear interpolation	CC/14/80	0.73						2858	Yes	-1.35	2.08	0.77
1	Linear interpolation	CC/14/85	0.68						2875	Yes	-1.68	2.36	0.78
1	Linear interpolation	CC/14/90	0.63						2893	Yes	-1.52	2.15	0.78
1	Linear interpolation	CC/14/95	0.58						2910	Yes	-1.54	2.12	0.79
1	Linear interpolation	CC/14/100	0.53						2928	Yes	-1.33	1.86	0.77
1	Linear interpolation	CC/14/105	0.48						2945	Yes	-1.67	2.15	0.78
1	Linear interpolation	CC/14/110	0.43						2963	Yes	-1.76	2.19	0.77
1	Linear interpolation	CC/14/115	0.38						2980	Yes	-1.36	1.74	0.77
1	Linear interpolation	CC/14/120	0.33						2998	Yes	-2.15	2.48	0.78
1	Linear interpolation	CC/14/125	0.28						3015	Yes	-1.70	1.98	0.77
1	Linear interpolation	CC/14/130	0.23						3033	Yes	-1.97	2.20	0.78
1	Linear interpolation	CC/14/132	0.21						3040	Yes	-2.11	2.32	0.78
1	Linear interpolation	CC/14/135	0.18						3050	Yes	-3.37	3.55	0.80
1	Linear interpolation	CC/14/137	0.16						3057	Yes	-2.97	3.13	0.79
1	Linear interpolation	CC/14/140	0.13						3068	Yes	-2.70	2.83	0.79
1	Calcareous foraminifera	CC/14/145	0.08	SUERC-5578	2931	29	3210	2931	3085	Yes	-1.65	1.73	0.77
1	Linear interpolation	CC/14/150	0.03						3247	Yes	-2.38	2.41	0.77
1	Linear interpolation	CC/14/158	-0.05						3509	Yes	-1.65	1.60	0.78

Site	Dated material	Core/ Sample reference	Elevation of sample (m AHD)	Laboratory Reference	^{14}C date (yr BP)	^{14}C age error (+/- yr)	Calibrated age range (2sigma) Max (yr)	Min (yr)	Median/ Interpolated age	Modern analogue present?	Palaeo-surface elevation (m AHD)	MSL (m AHD)	Total recon-struction error 2 sigma (+/- m)
1	Linear interpolation	CC/14/166	-0.13						3768	Yes	-2.71	2.57	0.77
1	Linear interpolation	CC/14/169	-0.16						3865	Yes	-2.50	2.34	0.77
1	Calcareous foraminifera	CC/14/174	-0.21	SUERC-5579	3685	29	4150	3910	4030	Yes	-3.54	3.33	0.79
1	Linear interpolation	CC/14/177	-0.24						4052	Yes	-2.62	2.37	0.77
1	Linear interpolation	CC/14/184	-0.29						4085	Yes	-2.56	2.27	0.77
1	Linear interpolation	CC/14/190	-0.37						4139	Yes	-2.36	1.99	0.77
1	Linear interpolation	CC/14/200	-0.47						4205	Yes	-2.48	2.01	0.77
1	Calcareous foraminifera	CC/14/205	-0.52	SUERC-6255	5804	28	6720	6500	4239	No	-3.20	2.68	0.95
1	Linear interpolation	CC/14/215	-0.62						4306	No	-2.84	2.22	0.87
1	Linear interpolation	CC/14/220	-0.67						4340	No	-2.69	2.02	0.86
1	Linear interpolation	CC/14/225	-0.72						4374	No	-3.01	2.29	0.97
1	Linear interpolation	CC/14/230	-0.77						4408	Yes	-2.64	1.87	0.84
1	Calcareous foraminifera	CC/14/235	-0.82	SUERC-5580	5159	30	5990	5760	4442	No	-3.00	2.18	0.92
1	Linear interpolation	CC/14/240	-0.87						4476	Yes	-2.19	1.32	0.80
1	Linear interpolation	CC/14/245	-0.92						4509	No	-2.97	2.05	0.82
1	Linear interpolation	CC/14/250	-0.97						4543	Yes	-2.37	1.40	0.83
1	Linear interpolation	CC/14/252	-0.99						4557	No	-3.95	2.96	0.88
1	Linear interpolation	CC/14/255	-1.02						4577	No	-3.18	2.16	0.87
1	Linear interpolation	CC/14/257	-1.04						4591	No	-2.80	1.76	0.82
1	Linear interpolation	CC/14/260	-1.07						4611	Yes	-2.76	1.69	0.79
1	Calcareous foraminifera	CC/14/265	-1.12	SUERC-5583	4542	27	5320	5050	4645	No	-3.00	1.88	0.83
1	Linear interpolation	CC/14/270	-1.17						4679	No	-3.21	2.04	0.80
1	Linear interpolation	CC/14/275	-1.22						4713	No	-3.52	2.30	0.81
1	Linear interpolation	CC/14/280	-1.27						4746	No	-3.20	1.93	0.81
1	Linear interpolation	CC/14/285	-1.32						4780	No	-3.83	2.51	0.81
1	Linear interpolation	CC/14/287	-1.34						4794	Yes	-3.85	2.51	0.80
1	Linear interpolation	CC/14/290	-1.37						4814	Yes	-2.59	1.22	0.77
1	Calcareous foraminifera	CC/14/295	-1.42	SUERC-5584	4278	27	4870	4826	4848	Yes	-3.31	1.89	0.79
1	Linear interpolation	CC/14/300	-1.47						4882	No	-2.95	1.48	0.80
2	Linear interpolation	AC/1/115	-0.29						1169	No	-0.51	0.22	0.90
2	Linear interpolation	AC/1/120	-0.34						1199	Yes	-1.05	0.71	0.91
2	Linear interpolation	AC/1/125	-0.39						1229	Yes	-1.28	0.90	0.82
2	Linear interpolation	AC/1/130	-0.44						1259	Yes	-1.61	1.17	0.83
2	Linear interpolation	AC/1/35	-0.49				(Combined)	(Combined)	1290	Yes	-0.75	0.26	0.82
2	Calcareous foraminifera	AC/1/45	-0.59	SUERC-7216 & 7217	1444 & 1481	20 & 18	1410	1290	1350	Yes	-0.98	0.39	0.79
2	Linear interpolation	AC/1/156	-0.70						1421	Yes	-0.98	0.28	0.78
2	Linear interpolation	AC/1/168	-0.82						1490	Yes	-1.14	0.32	0.77
2	Linear interpolation	AC/1/185	-0.93	SUERC-7218	1413	24	1350	1285	1558	Yes	-1.42	0.49	0.76

Site	Dated material	Core/ Sample reference	Elevation of sample (m AHD)	Laboratory Reference	^{14}C date (yr BP)	^{14}C age error (+/- yr)	Calibrated age range (2sigma) Max (yr)	Min (yr)	Median/ Interpolated age	Modern analogue present?	Palaeo-surface elevation (m AHD)	MSL (m AHD)	Total recon-struction error 2 sigma (+/- m)
2	Linear interpolation	AC/1/190	-1.05						1627	Yes	-1.34	0.30	0.76
2	Linear interpolation	AC/1/201	-1.15						1689	Yes	-1.57	0.42	0.78
2	Linear interpolation	AC/1/206	-1.20						1722	Yes	-2.14	0.94	0.78
2	Linear interpolation	AC/1/212	-1.26				(Combined)	(Combined)	1755	Yes	-2.75	1.50	0.77
2	Calcareous foraminifera	AC/1/220	-1.36	SUERC-7219 & 7222	1881 & 1914	24 & 18	1880	1720	1820	Yes	-2.65	1.29	0.79
2	Linear interpolation	AC/1/233	-1.47						2202	Yes	-2.85	1.38	0.78
2	Linear interpolation	AC/1/244	-1.58						2585	Yes	-3.28	1.69	0.79
2	Linear interpolation	AC/1/255	-1.69						2960	No	-4.43	2.74	0.89
2	Calcareous foraminifera	AC/1/262	-1.78	SUERC-7223	4195	25	4840	4620	3273	No	-4.76	2.99	0.91
2	Linear interpolation	AC/1/270	-1.83						3459	Yes	-4.31	2.48	0.85
2	Linear interpolation	AC/1/274	-1.88						3645	Yes	-4.63	2.74	0.87
2	Linear interpolation	AC/1/281	-1.96						3894	Yes	-4.36	2.40	0.82
2	Calcareous foraminifera	AC/1/288	-2.01	SUERC-7224	2854	20	3080	2870	4080	Yes	-4.03	2.02	0.80
2	Linear interpolation	AC/1/300	-2.13						4515	Yes	-4.11	1.98	0.80
2	Linear interpolation	AC/1/312	-2.26						4950	Yes	-4.06	1.80	0.82
2	Linear interpolation	AC/1/319	-2.33						5199	Yes	-3.36	1.04	0.79
2	Calcareous foraminifera	AC/1/324	-2.38	SUERC-7225	2743	20	2870	2775	5389	Yes	-3.34	0.96	0.80
2	Linear interpolation	AC/1/330	-2.44						5582	No	-3.88	1.45	0.91
2	Linear interpolation	AC/1/335	-2.49						5757	No	-4.50	2.01	1.09
2	Linear interpolation	AC/1/340	-2.54						5933	No	-4.18	1.64	0.97
2	Linear interpolation	AC/1/345	-2.59						6108	No	-3.91	1.32	0.86
2	Linear interpolation	AC/1/350	-2.64						6283	No	-3.91	1.27	0.85
2	Linear interpolation	AC/1/355	-2.69						6459	No	-4.51	1.83	0.90
2	Linear interpolation	AC/1/360	-2.74						6634	No	-4.14	1.40	0.96
2	Calcareous foraminifera	AC/1/366	-2.79	SUERC-7226	5994	23	6890	6730	6810	No	-4.17	1.38	0.95
2	Calcareous foraminifera	AC/10/124	-0.19	SUERC-7734	2645	24	2782	2744	2763	Yes	-1.76	1.57	0.83
2	Linear interpolation	AC/10/130	-0.24						2851	Yes	-1.65	1.42	0.79
2	Linear interpolation	AC/10/135	-0.29						2940	Yes	-2.01	1.73	0.78
2	Linear interpolation	AC/10/140	-0.34						3028	Yes	-1.38	1.05	0.78
2	Linear interpolation	AC/10/145	-0.39						3117	Yes	-1.93	1.54	0.79
2	Calcareous foraminifera	AC/10/149	-0.44	SUERC-7228	3020	25	3330	3080	3205	Yes	-2.04	1.61	0.79
2	Linear interpolation	AC/10/155	-0.49						3225	Yes	-2.17	1.68	0.78
2	Linear interpolation	AC/10/160	-0.54						3246	No	-2.25	1.71	0.80
2	Linear interpolation	AC/10/165	-0.59						3266	Yes	-2.19	1.60	0.79
2	Linear interpolation	AC/10/170	-0.64						3287	Yes	-1.91	1.28	0.78
2	Calcareous foraminifera	AC/10/174	-0.69	SUERC-7229	4323	25	4970	4830	3307	Yes	-1.14	0.46	0.80
2	Linear interpolation	AC/10/180	-0.74						3328	Yes	-1.64	0.90	0.79

Site	Dated material	Core/ Sample reference	Elevation of sample (m AHD)	Laboratory Reference	^{14}C date (yr BP)	^{14}C age error (+/- yr)	Calibrated age range (2sigma) Max (yr)	Min (yr)	Median/ Interpolated age	Modern analogue present?	Palaeo-surface elevation (m AHD)	MSL (m AHD)	Total recon-struction error 2 sigma (+/- m)
2	Linear interpolation	AC/10/185	-0.79						3348	No	-1.61	0.83	0.79
2	Linear interpolation	AC/10/190	-0.84						3369	No	-1.10	0.26	0.80
2	Linear interpolation	AC/10/195	-0.89						3389	Yes	-1.32	0.44	0.80
2	Calcareous foraminifera	AC/10/201	-0.94	SUERC-7232	3172	29	3470	3350	3410	Yes	-1.62	0.68	0.78

Table 2: Information on sea-level index points from Halifax and Cleveland Bays, central Great Barrier Reef area.

Author Reference	Site	Dated material	Core/sample	Elevation of	Laboratory	^{14}C date	^{14}C age	Calibrated age range (2 sigma)		IR +/- (m)	Indicative meaning	Palaeo-surface elevation	MSL (m AHD)
Number			reference	sample (m AHD)	Reference	(yr BP)	error (+/- yr)	Max (yr)	Min (yr)			(m AHD)	
1	S/CB	Mangrove mud	852 v3	-7.83	795	6910	240	8200	7300	1.02	MTL to HAT	1.125	-8.955
1	S/CB	Mangrove mud	902 v111	-9.91	WK 3555	8510	170	9950	8650	1.02	MTL to HAT	1.125	-11.035
1	S/CB	Mangrove mud	902 v111	-10.36	WK 3561	8360	200	10250	8350	1.02	MTL to HAT	1.125	-11.485
1	S/CB	Mangrove mud	902 v110	-10.21	WK 3556	8230	370	10550	9450	1.02	MTL to HAT	1.125	-11.335
1	S/CB	Mangrove mud	902 v108	-11.43	WK 3557	8880	220	10190	9910	1.02	MTL to HAT	1.125	-12.555
1	S/CB	Mangrove mud	902 v108	-12.04	WK 3558	8920	31	9550	8450	1.02	MTL to HAT	1.125	-13.165
1	S/CB	Mangrove mud	902 v106	-12.48	WK 3550	8110	210	9550	8550	1.02	MTL to HAT	1.125	-13.605
1	S/CB	Mangrove mud	902 v107	-11.15	WK 3559	8160	200	10250	8950	1.02	MTL to HAT	1.125	-12.275
1	S/CB	Mangrove mud	902 v112	-9.32	WK 3554	8460	210	9250	8150	1.02	MTL to HAT	1.125	-10.445
1	S/CB	Mangrove mud	902 v113	-9.4	WK 3553	7840	170	9050	8000	1.02	MTL to HAT	1.125	-10.525
1	S/CB	Mangrove mud	902 v114	-10.07	WK 3552	7660	200	10250	9050	1.02	MTL to HAT	1.125	-11.195
1	S/CB	Wood	912 bv2	-11.93	WK 2455	6740	250	8150	6950	?	Above MTL		below -12.03
1	S/CB	Mangrove mud	912 bv2	-12.25	WK 3551	8660	230	11350	9650	1.02	MTL to HAT	1.125	-13.375
1	S/CB	Mangrove mud	912 bv2	-12.88	WK 3560	9370	290	9050	8150	1.02	MTL to HAT	1.125	-14.005
1	S/CB	Mangrove mud	KG857 dv11	-14.38	GAK 6719	7730	170	9450	8350	1.02	MTL to HAT	1.125	-15.505
1	S/CB	Mangrove mud	KG857 dv16	-11.03	AK 7223	7970	200	7600	6750	1.02	MTL to HAT	1.125	-12.155
2	S/CB	Gastropod	91 level 1-62	-37.6	2210	8830	120	10200	9550	?	Below MLWST (-1.13m)		-36.47

Author Reference Number	Site	Dated material	Core/sample reference	Elevation of sample (m AHD)	Laboratory Reference	^{14}C date (yr BP)	^{14}C age error (+/- yr)	Calibrated age range (2 sigma) Max (yr)	Min (yr)	IR +/- (m)	Indicative meaning	Palaeo-surface elevation (m AHD)	MSL (m AHD)
2	S/CB	Foraminifera	91 level 5-46	-27.9	2211	2550	160	3000	2150	?	Below MLWST (-1.13m)		-26.77
2	S/CB	Foraminifera	91 level 5-83	-28.3	2212	5800	190	7200	6200	?	Below MLWST (-1.13m)		-27.17
2	S/CB	Organic clay	91 level 5-128	-28.83	2213	9470	340	11950	9650	1.02	MTL to HAT	1.125	-29.955
2	S/CB	Coral fragments	91 level 5-138	-28.93	2214	32700	450			?	Below MLWST (-1.13m)		-27.8
2	S/CB	Ostrea sp.	91 level 6-48	-28.8	2215	4650	70		5600	?	Below MLWST (-1.13m)		-27.91
3	Cocoa Creek	Tellina serricostata	10a	0.74	WK 6504	3420	90	3910	3460	0.2	Top of intertidal sand flat	-0.5	0.74
3	Cocoa Creek	Anadara trapezia	11a	0.63	WK 6506	3130	80	3560	3070	0.2	Top of intertidal sand flat	-0.5	0.63
3	Cocoa Creek	Anadara cf. granosa	12d	-0.215	WK 6512	3150	70	3560	3160	0.2	Top of intertidal sand flat	-0.5	-0.215
3	Cocoa Creek	Tellina serricostata	13b	0.405	WK 6514	2845	49	3140	2790	0.2	Top of intertidal sand flat	-0.5	0.405
3	Cocoa Creek	Bulk sediment	15	0.106	WK 6517	590	50	660	520	0.2	Top of intertidal sand flat	-0.5	0.106
3	Cocoa Creek	Bulk sediment	16	0.17	WK 6518	1450	80	1530	1180	0.2	Top of intertidal sand flat	-0.5	0.17
3	Cocoa Creek	Tellina imbellis	18	0.284	WK 6519	1950	85	2120	1700	0.2	Top of intertidal sand flat	-0.5	0.284
3	Cocoa Creek	Anadara trapezia	19b	-0.079	WK 6521	2660	60	2930	2540	0.2	Top of intertidal sand flat	-0.5	-0.079
3	Cocoa Creek	Anadara passa	20	-0.031	WK 6522	1720	60	1820	1510	0.2	Top of intertidal sand flat	0.469	-0.031
4	CB	Ceriops wood	Core 6-25cm	2.65	GAK 6263	690	90	790	520	1.02	MTL to HAT	1.125	1.625
4	CB	Mangrove root (in situ?)	Core 2-145cm	-0.35	GAK 6264	1620	110	1850	1300	1.02	MTL to HAT	1.125	-1.375
4	CB	Bulk mangrove mud	Core 15-315cm	-1.95	GAK 6265	7230	550	9450	6950	1.02	MTL to HAT	1.125	-2.975
5	Magnetic Island	Saccostrea	Bbay 1a	2.56	WK 2917	4040	50	4810	4410	0.12	MHWNT to	0.86	1.7

Author Reference Number	Site	Dated material	Core/sample reference	Elevation of sample (m AHD)	Laboratory Reference	^{14}C date (yr BP)	^{14}C age error (+/- yr)	Calibrated age range (2 sigma) Max (yr)	Min (yr)	IR +/- (m)	Indicative meaning	Palaeo-surface elevation (m AHD)	MSL (m AHD)
		cucculata									MTL		
5	Magnetic Island	Saccostrea cucculata	Bbay 1b	2.56	WK 2918	4600	60	5500	5000	0.12	MHWNT to MTL	0.86	1.7
5	Magnetic Island	Saccostrea cucculata	Bbay 1c	2.56	WK 2919	5660	50	6570	6300	0.12	MHWNT to MTL	0.86	1.7
5	Magnetic Island	Saccostrea cucculata	Bbay4	2.56	WK 2921	5010	50	5900	5610	0.12	MHWNT to MTL	0.86	1.7
6	Magnetic Island	Coral microatoll	EWM 4	0.32	-	5325	80	6280	5930	0.05	MLWST	-1.13	1.45
6	Magnetic Island	Coral microatoll	EWM 5	0.12	-	4770	80	5650	5310	0.05	MLWST	-1.13	1.25
6	Magnetic Island	Coral microatoll	EWM 6	-0.38	-	4530	105	5500	4850	0.05	MLWST	-1.13	0.75
6	Magnetic Island	Coral microatoll	EWM 7	-0.18	-	4765	115	5750	5050	0.05	MLWST	-1.13	0.95
7	Orpheus Island	Coral	H1-2.35	-3.43	SUA-1673	1630	90	1730	1310	5	5 m below MLWST	-6.08	2.65
7	Orpheus Island	Coral	H1-6.7	-7.78	SUA-1674	3330	120	3900	3250	5	5 m below MLWST	-6.08	-1.7
7	Orpheus Island	Coral	H2-0.7	-1.78	SUA-1675	2620	90	2950	2350	5	5 m below MLWST	-6.08	4.3
7	Orpheus Island	Coral	H2-3.1	-4.18	SUA-1676	2990	90	3380	2920	5	5 m below MLWST	-6.08	1.9
7	Orpheus Island	Coral	H2-7.7	-8.78	SUA-1677	4060	90	4850	4300	5	5 m below MLWST	-6.08	-2.7
7	Orpheus Island	Coral	H2-13.75	-14.83	SUA-1748	4460	110	5450	4800	5	5 m below MLWST	-6.08	-8.75
7	Orpheus Island	Coral	H3-0.3	-1.38	SUA-1678	5320	100	6300	5900	5	5 m below MLWST	-6.08	4.7
7	Orpheus Island	Coral	H3-1.0	-2.08	SUA-1679	5920	100	7000	6450	5	5 m below MLWST	-6.08	4
7	Orpheus Island	Coral	H3-3.45	-4.53	SUA-1680	6090	100	7250	6650	5	5 m below MLWST	-6.08	1.55
7	Orpheus Island	Coral	H3-9.75	-10.83	SUA-1749	6610	250	7950	6850	5	5 m below MLWST	-6.08	-4.75
7	Rattlesnake Island	Coral	H1	0.42	GAK 7688	5530	130	6650	5950	5	5 m below MLWST	-6.08	6.5
7	Rattlesnake Island	Coral	H1	-1.58	GAK 9294	5380	120	6410	5910	5	5 m below MLWST	-6.08	4.5
7	Rattlesnake Island	Coral	H1	-2.58	GAK 9295	6480	170	7700	6950	5	5 m below MLWST	-6.08	3.5
7	Rattlesnake Island	Coral	H1	-7.08	GAK 9296	6860	140	7950	7400	5	5 m below MLWST	-6.08	-1
7	Rattlesnake Island	Coral	H1	-12.58	GAK 9297	7010	180	8200	7500	5	5 m below MLWST	-6.08	-6.5

Author Reference Number	Site	Dated material	Core/sample reference	Elevation of sample (m AHD)	Laboratory Reference	^{14}C date (yr BP)	^{14}C age error (+/- yr)	Calibrated age range (2 sigma) Max (yr)	Calibrated age range (2 sigma) Min (yr)	IR +/- (m)	Indicative meaning	Palaeo-surface elevation (m AHD)	MSL (m AHD)
6	Great Palm Island	Coral microatoll	GP/5	-0.03	-	4990	115	6000	5450	0.05	MLWST	-1.08	1.05
6	Great Palm Island	Coral microatoll	GP/4	-0.03	-	4390	90	5300	4830	0.05	MLWST	-1.08	1.05
6	Great Palm Island	Coral microatoll	GP/3	-0.08	-	5490	100	6490	5990	0.05	MLWST	-1.08	1
6	Orpheus Island	Coral microatoll	EWO/4	0.52	-	4860	90	5900	5300	0.05	MLWST	-1.08	1.6
6	Orpheus Island	Coral microatoll	EWO/3	0.22	-	4300	80	5300	4550	0.05	MLWST	-1.08	1.3
6	Orpheus Island	Coral microatoll	EWO/2	-0.03	-	3020	80	3390	2960	0.05	MLWST	-1.08	1.05
6	Orpheus Island	Coral microatoll	EWO/1	-0.28	-	2460	80	2740	2350	0.05	MLWST	-1.08	0.8
6	Fantome Island	Coral microatoll	FA/5	0.12	-	5340	80	6290	5930	0.05	MLWST	-1.08	1.2
6	Fantome Island	Coral microatoll	FA/4	0.02	-	5520	100	6550	5950	0.05	MLWST	-1.08	1.1
6	Fantome Island	Coral microatoll	FA/3	-0.23	-	4320	90	5300	4550	0.05	MLWST	-1.08	0.85
6	Fantome Island	Coral microatoll	FA/1	-0.43	-	2550	90	2790	2350	0.05	MLWST	-1.08	0.65
6	Fantome Island	Coral microatoll	FA/2	-0.53	-	2540	90	2780	2350	0.05	MLWST	-1.08	0.55
6	Dunk Island	Coral microatoll	EWD-1	0.62	-	5725	105	6750	6300	0.05	MLWST	-1.08	1.7
6	Dunk Island	Coral microatoll	EWD-2	0.47	-	5295	100	6300	5850	0.05	MLWST	-1.08	1.55
6	Dunk Island	Coral microatoll	EWD-3	0.12	-	5355	80	6300	5940	0.05	MLWST	-1.08	1.2
6	Dunk Island	Coral microatoll	EWD-4	0.22	-	4645	105	5600	4950	0.05	MLWST	-1.08	1.3
6	Goold Island	Coral microatoll	EWG-1	0.72	-	5855	145	7050	6300	0.05	MLWST	-1.08	1.8
6	Goold Island	Coral microatoll	EWG-2	0.42	-	5215	115	6300	5700	0.05	MLWST	-1.08	1.5
6	Goold Island	Coral microatoll	EWG-3	0.02	-	3050	80	3450	2990	0.05	MLWST	-1.08	1.1
8	S/CB	Wood	I A2	-0.58	-	4490	70	5320	4870	?	Above MTL		below -0.68
8	S/CB	Wood	I A1	-0.58	-	200	60	430	0	?	Above MTL		below -0.68
8	S/CB	Wood	915v5	-13.98	-	8020	100	9300	8550	?	Above MTL		below -14.08
8	S/CB	Wood	915v6	-15.72	-	8220	50	9410	9020	?	Above MTL		below -15.82
8	S/CB	Mangrove mud	915v3	-10.38	-	8540	200	10150	8750	1.02	MTL to HAT	1.125	-11.405
8	S/CB	Mangrove mud	915v8	-23.28	-	8960	180	10500	9550	1.02	MTL to HAT	1.125	-24.305

Author Reference Number	Site	Dated material	Core/sample reference	Elevation of sample (m AHD)	Laboratory Reference	^{14}C date (yr BP)	^{14}C age error (+/- yr)	Calibrated age range (2 sigma) Max (yr)	Min (yr)	IR +/- (m)	Indicative meaning	Palaeo-surface elevation (m AHD)	MSL (m AHD)
8	S/CB	Mangrove mud	915v5	-14.58	-	8550	210	10250	8950	1.02	MTL to HAT	1.125	-15.605
9	S/CB	Anadara maculosa	RMC 1	1.9	-	3150	60	3480	3200	?	below MLWST		above 3.03
1	S/CB	Austromacta dissimilis	912 bv4	-13.4	-	7741	97	9000	8350	?	below MLWST		above - 13.4
10	S/CB	Bursa rana	902 v102	-14.93	-	2720	140	3250	2350	?	below MLWST		below - 16.06
10	S/CB	Wood	902 v102	-16.93	-	8300	230	9950	8550	?	Above MTL		below - 17.03
1	S/CB	Wood	902 v120	-17.41	-	8230	110	9500	8950	?	Above MTL		below - 17.31
1	S/CB	Vexillium amanda	902 v121	-16.23	-	3310	210	4150	2950	?	below MLWST		above - 15.1
1	S/CB	Vexillium obeliscus	902 v121	-16.95	-	5411	92	6400	5940	?	below MLWST		above - 15.82

Table notes:

Site abbreviation: S/CB – Subtidal site in Cleveland Bay.

Index points have ages in conventional radiocarbon and calibrated ages before present (2 sigma). Calibration uses the Oxcal program, version 3.10 (Bronk Ramsey, 1995; Hughen *et al.*, 2004). All calibrations use the southern hemisphere calibration curve (Stuiver *et al.*, 1998) but are not corrected for the marine reservoir effect.

MSL refers to the reconstructed elevation of the index point with respect to present day Mean Sea Level.

IR is the Indicative Range of an indicator (in metres).

Table entries highlighted in yellow refer to index points which only give information on the limits of sea-level at that time.

Author reference numbers refer to: 1.) (Larcombe and Carter, 1998) 2.) (Ohlenbusch, 1991) 3.) (Harvey *et al.*, 2001) 4.) (Spenceley, 1980) 5.) (Beaman *et al.*, 1994) 6.) (Chappell *et al.*, 1983) 7.) (Hopley, 1983) 8.) (Tye, 1992) 9.) Carter, unpublished data 10.) (Larcombe *et al.*, 1995)

Table 3: Information on sea-level index points from other areas of north Queensland (areas indicated in Figures 1.1 and 6.2).

Author Reference Number	Site	Dated material	Core/sample Reference	Elevation Of Sample (m AHD)	Laboratory Reference	^{14}C date (yr BP)	^{14}C age Error (+/- yr)	Calibrated age Range (2 sigma) Max (yr)	Calibrated age Range (2 sigma) Min (yr)	IR +/- (m)	Indicative meaning	Palaeo-surface elevation (m AHD)	MSL (m AHD)
3	Cape Tribulation	Coral	JMB1	-2.4	-	4600	80	4950	5600	5	5 m below MLWST	-5.81	3.41
3	Cape Tribulation	Coral	JMB1	-3.45	-	4380	70	4830	5290	5	5 m below MLWST	-5.81	2.36
3	Cape Tribulation	Coral	JMB4	1.5	-	5940	80	6550	6990	5	5 m below MLWST	-5.81	7.31
3	Cape Tribulation	Coral	JMB4	-0.25	-	6020	80	6660	7160	5	5 m below MLWST	-5.81	5.56
3	Cape Tribulation	Coral	JMB4	-2.5	-	5730	120	6290	6800	5	5 m below MLWST	-5.81	3.31
3	Cape Tribulation	Coral	JMB4-(A)	1.5	-	5520	60	6190	6450	5	5 m below MLWST	-5.81	7.31
4	Cape Tribulation	Coral	Ryker 7	-0.45	-	4960	80	5580	5910	5	5 m below MLWST	-5.81	5.36
4	Cape Tribulation	Coral	R3-2C	-2	-	6410	70	7200	7440	5	5 m below MLWST	-5.81	3.81
4	Cape Tribulation	Coral	R2-3C	-2.15	-	6350	115	6950	7500	5	5 m below MLWST	-5.81	3.66
4	Cape Tribulation	Coral	R4-3C	-5.37	-	6830	80	7510	7840	5	5 m below MLWST	-5.81	0.44
4	Cape Tribulation	Coral	R2-5D	-6.15	-	6630	60	7420	7620	5	5 m below MLWST	-5.81	-0.34
4	Cape Tribulation	Coral	R4-2E	-6.17	-	6710	100	7420	7740	5	5 m below MLWST	-5.81	-0.36
4	Cape Tribulation	Coral	R3-3D	-6.2	-	7330	260	7550	8750	5	5 m below MLWST	-5.81	-0.39
4	Cape Tribulation	Coral	R1-6B	-6.7	-	6770	60	7500	7730	5	5 m below MLWST	-5.81	-0.89
4	Cape Tribulation	Coral	M2-1A	-0.87	-	5700	80	6310	6670	5	5 m below MLWST	-5.81	4.94
4	Cape Tribulation	Coral	M3-1H	-1.86	-	6380	80	7030	7440	5	5 m below MLWST	-5.81	3.95
4	Cape Tribulation	Coral	M2-2H	-3.8	-	6220	70	6900	7270	5	5 m below MLWST	-5.81	2.01
4	Cape Tribulation	Coral	M1-4E	-7.4	-	6880	70	7580	7850	5	5 m below MLWST	-5.81	-1.59
4	Cape Tribulation	Coral	E2-1FX	-1.77	-	4840	70	5320	5730	5	5 m below MLWST	-5.81	4.04
4	Cape Tribulation	Coral	E2-2B	-2.17	-	4900	60	5470	5860	5	5 m below MLWST	-5.81	3.64
4	Cape Tribulation	Coral	E2-4B	-4.87	-	5830	90	6410	6860	5	5 m below MLWST	-5.81	0.94
5	Low Wooded Island/Cooktown	Coral microatoll	-	-0.21	ANU 1604	6080	90	6720	7210	0.05	MLWST	-0.81	0.6
5	Houghton Reef/Cooktown	Coral microatoll	-	0.29	ANU 1287	5850	170	6250	7200	0.05	MLWST	-0.81	1.1
5	Leggatt Reef/Cooktown	Coral microatoll	-	0.19	ANU 1286	5800	130	6300	6900	0.05	MLWST	-0.81	1
5	Stainer Reef/P. Charlotte Bay	Coral microatoll	-	-0.18	ANU 1639	4980	80	5590	5910	0.05	MLWST	-0.81	0.63
5	Nymph Reef/Cooktown	Coral microatoll	-	0.49	ANU 1285	3700	90	3700	4400	0.05	MLWST	-0.81	1.3
5	E. Pethebridge Reef/Cooktown	Coral microatoll	-	-0.21	ANU 1384	2370	70	2150	2750	0.05	MLWST	-0.81	0.6
6	King Island/Cooktown	Coral microatoll	-	0.19	ANU 2324	5050	135	5450	6200	0.05	MLWST	-0.81	1
6	King Island/Cooktown	Coral microatoll	-	0.19	ANU 2323	5110	105	5600	6200	0.05	MLWST	-0.81	1
6	King Island/Cooktown	Coral microatoll	-	-0.01	ANU 2322	3950	100	4050	4850	0.05	MLWST	-0.81	0.8
6	King Island/Cooktown	Coral microatoll	-	-0.11	ANU 2321	3960	100	4050	4850	0.05	MLWST	-0.81	0.7
6	Flinders Island/Cooktown	Coral microatoll	-	0.39	ANU 2319	5660	205	5900	6950	0.05	MLWST	-0.81	1.2
6	Flinders Island/Cooktown	Coral microatoll	-	0.09	ANU 2320	5660	105	6200	6750	0.05	MLWST	-0.81	0.9
6	Yule Point/Cooktown	Coral microatoll	EWY-1	0.69	-	4420	105	4800	5350	0.05	MLWST	-0.81	1.5
6	Yule Point/Cooktown	Coral microatoll	EWY-2	0.54	-	3605	100	3600	4250	0.05	MLWST	-0.81	1.35
6	Yule Point/Cooktown	Coral microatoll	EWY-3	0.19	-	4475	125	4800	5500	0.05	MLWST	-0.81	1
6	Yule Point/Cooktown	Coral microatoll	EWY-6	0.04	-	1305	70	1050	1340	0.05	MLWST	-0.81	0.85
6	Yule Point/Cooktown	Coral microatoll	EWY-4	-0.16	-	1150	65	930	1240	0.05	MLWST	-0.81	0.65

Author Reference Number	Site	Dated material	Core/sample Reference	Elevation Of Sample (m AHD)	Laboratory Reference	^{14}C date (yr BP)	^{14}C age Error (+/- yr)	Calibrated age Range (2 sigma) Max (yr)	Min (yr)	IR +/- (m)	Indicative meaning	Palaeo-surface elevation (m AHD)	MSL (m AHD)
7	Fish Island/Cooktown	Coral microatoll		-0.21	-	5700	110	6280	6730	0.05	MLWST	-0.81	0.6
7	Flinders Island/Cooktown	Coral microatoll		0.24	-	5500	360	5450	7250	0.05	MLWST	-0.81	1.05
8	Mulgrave river	Mangrove mud	150	-0.55	-	6100	140	7350	6600	0.86	MTL to HAT	0.92	-1.47
8	Mulgrave river	Mangrove mud	450	-3.55	-	6660	100	7690	7330	0.86	MTL to HAT	0.92	-4.47
8	Mulgrave river	Mangrove mud	660	-5.65	-	7050	130	8200	7600	0.86	MTL to HAT	0.92	-6.57
9	inner shelf/Bramston Beach	whole shells/shellhash	VE1b-155	-7.5	-	2650	70	2950	2490	?	below MLWST		above -6.37
9	inner shelf/Bramston Beach	whole shells/shellhash	VE2-60	-8.5	-	2450	120	2800	2150	?	below MLWST		above -7.37
9	inner shelf/Bramston Beach	whole shells/shellhash	V14-70	-9.2	-	1430	90	1530	1170	?	below MLWST		above -8.07
9	inner shelf/Bramston Beach	wood	V13-110	-20.4	-	9080	90	10500	9900	?	above MTL		below -20.46
9	inner shelf/Bramston Beach	whole shells/shellhash	V12-30	-20.8	-	2160	90	2350	1940	?	below MLWST		above -19.67
9	inner shelf/Bramston Beach	strombus vittatus	V12-128	-21.8	-	6540	190	7800	7000	?	below MLWST		above -20.67
9	inner shelf off Innisfail	bivalves (incl. Anadara)	VA1-175	-6.6	-	5180	70	6180	5740	?	below MLWST		above -5.47
9	inner shelf off Innisfail	whole shells/shellhash	VA1-295	-7.7	-	5300	120	6350	5750	?	below MLWST		above -6.57
9	inner shelf off Innisfail	Bivalves	V11-85	-6.7	-	1820	60	1890	1560	?	below MLWST		above -5.57
9	inner shelf off Innisfail	whole shells/shellhash	V20-65	-9.3	-	1740	60	1820	1520	?	below MLWST		above -8.17
9	inner shelf off Innisfail	whole shells/shellhash	GI5-5	-6.55	-	1690	80	1820	1410	?	below MLWST		above -5.42
9	inner shelf off Innisfail	organic mud and roots	V4-315	-22.5	-	9340	130	11100	10200	0.86	MTL to HAT	0.92	-23.42
9	inner shelf off Innisfail	organic mud and roots	V9-375	-19.8	-	8790	110	10200	9550	0.86	MTL to HAT	0.92	-20.72
10	Cardwell	Wood		0.8	-	1160	50	1230	960	?	above MTL		below 0.74
11	Hinchinbrook Island	Rhizophera mangrove	mb9-f1	-2.05	-	7405	110	8400	7970	1.05	MTL to HAT	1.15	-3.2
11	Hinchinbrook Island	Rhizophera mangrove	mb6-f3	-4.05	-	7860	120	9050	8400	1.05	MTL to HAT	1.15	-5.2
11	Hinchinbrook Island	Rhizophera mangrove	mb6-f4	-4.25	-	6845	85	7850	7510	1.05	MTL to HAT	1.15	-5.4
11	Hinchinbrook Island	Rhizophera mangrove	mbl-f5	-5.05	-	7765	110	9000	8350	1.05	MTL to HAT	1.15	-6.2
11	Hinchinbrook Island	Rhizophera mangrove	mb4-f6	-5.45	-	7950	155	9300	8400	1.05	MTL to HAT	1.15	-6.6
11	Hinchinbrook Island	Rhizophera mangrove	mb8-f7	-6.3	-	8045	110	9300	8550	1.05	MTL to HAT	1.15	-7.45
11	Hinchinbrook Island	Rhizophera mangrove	mb2-f8	-8	-	7855	110	9000	8400	1.05	MTL to HAT	1.15	-9.15
11	Hinchinbrook Island	Rhizophera mangrove	mb16-f9	-8.85	-	7760	115	9000	8350	1.05	MTL to HAT	1.15	-10
11	Hinchinbrook Island	Rhizophera mangrove	mb7-f10	-9.05	-	7345	525	9550	7150	1.05	MTL to HAT	1.15	-10.2
11	Hinchinbrook Island	Rhizophera mangrove	mb5-f11	-9.65	-	8530	120	9950	9250	1.05	MTL to HAT	1.15	-10.8
11	Hinchinbrook Island	mangrove mud	rbl-f12	-9.65	-	8555	135	10150	9050	1.05	MTL to HAT	1.15	-10.8
11	Hinchinbrook Island	Rhizophera mangrove	mb15-f14	-11.4	-	8415	120	9650	9000	1.05	MTL to HAT	1.15	-12.55
11	Hinchinbrook Island	Rhizophera mangrove	mb3-f15	-11.45	-	8155	200	9550	8550	1.05	MTL to HAT	1.15	-12.6
11	Hinchinbrook Island	Rhizophera mangrove	mb3-f16	-13.55	-	8045	85	9300	8600	1.05	MTL to HAT	1.15	-14.7
11	Hinchinbrook Island	Rhizophera mangrove	mb3-f17	-14.2	-	8935	145	10400	9550	1.05	MTL to HAT	1.15	-15.35
11	Hinchinbrook Island	Rhizophera mangrove	mb3-f18	-14.5	-	7815	165	9150	8200	1.05	MTL to HAT	1.15	-15.65
11	Hinchinbrook Island	Rhizophera mangrove	mb11-f19	-17.35	-	8300	125	9550	9000	1.05	MTL to HAT	1.15	-18.5
11	Hinchinbrook Island	shell hash	mb3-r1	-2.35	-	4710	105	5700	5050	?	Below MLWST		above -1.22
11	Hinchinbrook Island	shell hash	mb3-r2	-2.35	-	4605	90	5600	4950	?	Below MLWST		above -1.22

Author Reference Number	Site	Dated material	Core/sample Reference	Elevation Of Sample (m AHD)	Laboratory Reference	^{14}C date (yr BP)	^{14}C age Error (+/- yr)	Calibrated age Range (2 sigma) Max (yr)	Min (yr)	IR +/- (m)	Indicative meaning	Palaeo-surface elevation (m AHD)	MSL (m AHD)
11	Hinchinbrook Island	shell	walka-r3	-1.95	-	4600	95	5600	4950	?	Below MLWST		above -0.82
11	Hinchinbrook Island	mangrove mud	walkb-r4	-1.05	-	2935	115	3400	2750	1.05	MTL to HAT	1.15	-2.2
11	Hinchinbrook Island	broken shell	walkb-r5	-1.05	-	5070	190	6300	5300	?	Below MLWST		above 0.08
11	Hinchinbrook Island	shell hash	walkb-r5	-1.85	-	5240	190	6450	5600	?	Below MLWST		above -0.72
11	Hinchinbrook Island	mangrove mud	walkc-r7	1.45	-	2860	90	3250	2770	1.05	MTL to HAT	1.15	0.3
11	Hinchinbrook Island	mangrove mud	walkc-r8	0.55	-	3500	125	4150	3450	1.05	MTL to HAT	1.15	-0.6
11	Hinchinbrook Island	broken shell	walkc-r9	-1.05	-	3830	100	4550	3900	?	Below MLWST		above 0.08
11	Hinchinbrook Island	mangrove mud	walkd-r10	0.2	-	690	70	740	540	1.05	MTL to HAT	1.15	-0.95
11	Hinchinbrook Island	broken shell	walkd-r11	-1.45	-	4370	110	5350	4600	?	Below MLWST		above -0.32
11	Hinchinbrook Island	broken shell	douba-r12	-0.25	-	4010	180	5050	3850	?	Below MLWST		above 0.88
11	Hinchinbrook Island	mangrove mud	douba-r13	1.45	-	2990	210	3700	2700	1.05	MTL to HAT	1.15	0.3
11	Hinchinbrook Island	mangrove mud	douba-r14	1.25	-	2410	110	2750	2150	1.05	MTL to HAT	1.15	0.1
11	Hinchinbrook Island	shell hash	doubb-r15	-1.05	-	4390	115	5350	4600	?	Below MLWST		above 0.08
11	Hinchinbrook Island	shell hash	deepb-r16	-1.05	-	3950	125	4850	4000	?	Below MLWST		above 0.08
11	Hinchinbrook Island	mangrove mud	broda-r17	1.45	-	2100	170	2750	1550	1.05	MTL to HAT	1.15	0.3
11	Hinchinbrook Island	mangrove mud	broda-r18	0.15	-	4160	120	5050	4300	1.05	MTL to HAT	1.15	-1
11	Hinchinbrook Island	shell hash	broda-r19	-0.95	-	4080	90	4850	4300	?	Below MLWST		above 0.18
11	Hinchinbrook Island	mangrove mud	rb7-f13	-10.15	-	8590	150	10200	9250	1.05	MTL to HAT	1.15	-11.3
11	Hinchinbrook Island	mangrove mud	rb12-f2	-3.3	-	6275	90	7420	6940	1.05	MTL to HAT	1.15	-4.45
12	Hinchinbrook Island	mangrove mud	Hole6-1	-0.4	-	4680	135	5750	4950	1.05	MTL to HAT	1.15	-1.55
12	Hinchinbrook Island	mangrove mud	Hole6-2	-1.3	-	2180	90	2350	1940	1.05	MTL to HAT	1.15	-2.45
12	Hinchinbrook Island	mangrove mud	Hole6-3	-2.5	-	1350	80	1410	1060	1.05	MTL to HAT	1.15	-3.65
12	Hinchinbrook Island	mangrove mud	Hole7-1	-4.8	-	7130	150	8350	7650	1.05	MTL to HAT	1.15	-5.95
13	Hinchinbrook Island	mangrove wood	RB1G	0	Beta 1186	4995	90	5920	5590	1.05	MTL to HAT	1.15	-1.15
13	Hinchinbrook Island	shells	RB1H	-4	Beta 1187	5925	110	7050	6450	?	below MLWST		above -2.87
13	Hinchinbrook Island	shells	RB1K	-7	Beta 1188	5725	85	6730	6310	?	below MLWST		above -5.87
13	Hinchinbrook Island	mangrove wood	RB7C	1.2	Beta 1190	2130	85	2340	1920	1.05	MTL to HAT	1.15	0.05
13	Hinchinbrook Island	shells	RB7H	-3	Beta 1191	5330	90	6290	5920	?	below MLWST		above -1.87
13	Hinchinbrook Island	mangrove wood	RB7P	-8	Beta 1193	8075	105	9300	8600	1.05	MTL to HAT	1.15	-9.15
13	Hinchinbrook Island	mangrove wood	RB7M	-6	Beta 1192	7450	110	8420	8010	1.05	MTL to HAT	1.15	-7.15
13	Hinchinbrook Island	mangrove wood	RB12D	0	Beta 1195	4890	100	5900	5300	1.05	MTL to HAT	1.15	-1.15
13	Hinchinbrook Island	shells	RB5E/F	-0.5	ANU 2274	1260	110	1350	950	?	below MLWST		above 0.63
13	Hinchinbrook Island	shells	RB7G	-1	ANU 2275	4750	150	5900	4950	?	below MLWST		above 0.13
13	Hinchinbrook Island	mangrove wood	RBMW	0.5	SUA 705	4950	110	5930	5460	1.05	MTL to HAT	1.15	-0.65
14	Cardwell	wood	RMC2	0.8	-	1160	50	1230	960	?	above MTL		below 0.7
6	Camp Island	Coral microatoll	EWC/1	0.1	-	5820	115	6900	6300	0.05	MLWST	-1	1.1
6	Camp Island	Coral microatoll	EWC/2	-0.1	-	5020	105	5990	5580	0.05	MLWST	-1	0.9
6	Camp Island	Coral microatoll	EWC/3	-0.3	-	1280	105	1370	960	0.05	MLWST	-1	0.7

Author Reference Number	Site	Dated material	Core/sample Reference	Elevation Of Sample (m AHD)	Laboratory Reference	^{14}C date (yr BP)	^{14}C age Error (+/- yr)	Calibrated age Range (2 sigma) Max (yr)	Min (yr)	IR +/- (m)	Indicative meaning	Palaeo-surface elevation (m AHD)	MSL (m AHD)
6	Stone Island	Coral microatoll	EWS/1	0.35	-	5925	115	7200	6400	0.05	MLWST	-1	1.35
6	Stone Island	Coral microatoll	EWS/2	0.35	-	5285	135	6400	5700	0.05	MLWST	-1	1.35
6	Stone Island	Coral microatoll	EWS/3	0.25	-	5755	105	6760	6310	0.05	MLWST	-1	1.25
6	Stone Island	Coral microatoll	EWS/4	-0.1	-	5250	100	6300	5750	0.05	MLWST	-1	0.9
1	Redbill Reef	Coral	SUA-1781	-7.52	SUA-1781	6810	270	8250	7050	5	5 m below MLWST	-7.22	-0.3
1	Redbill Reef	Coral	SUA-1782	-8.72	SUA-1782	6850	270	8350	7150	5	5 m below MLWST	-7.22	-1.5
1	Redbill Reef	Coral	SUA-1786	-7.32	SUA-1786	4580	340	6050	4250	5	5 m below MLWST	-7.22	-0.1
1	Redbill Reef	Coral	SUA-1787	-11.92	SUA-1787	6980	240	8350	7400	5	5 m below MLWST	-7.22	-4.7
1	Redbill Reef	Coral	SUA-1788	-15.02	SUA-1788	6890	270	8350	7250	5	5 m below MLWST	-7.22	-7.8
1	Redbill Reef	Coral	SUA-1791	-5.82	SUA-1791	6540	220	7850	6900	5	5 m below MLWST	-7.22	1.4
1	Gable Reef	Coral	SUA-1759	-2.77	SUA-1759	1340	220	1750	750	5	5 m below MLWST	-7.22	4.45
1	Gable Reef	Coral	SUA-1760	-4.17	SUA-1760	5520	270	6950	5650	5	5 m below MLWST	-7.22	3.05
1	Gable Reef	Coral	SUA-1761	-4.92	SUA-1761	6500	210	7800	6850	5	5 m below MLWST	-7.22	2.3
1	Gable Reef	Coral	SUA-1762	-6.02	SUA-1762	6480	210	7750	6800	5	5 m below MLWST	-7.22	1.2
1	Gable Reef	Coral	SUA-1763	-7.87	SUA-1763	6690	280	8150	6850	5	5 m below MLWST	-7.22	-0.65
1	Gable Reef	Coral	SUA-1764	-8.82	SUA-1764	6850	290	8350	7050	5	5 m below MLWST	-7.22	-1.6
1	Gable Reef	Coral	SUA-1765	-14.17	SUA-1765	7010	260	8400	7400	5	5 m below MLWST	-7.22	-6.95
1	Gable Reef	Coral	SUA-1768	-3.12	SUA-1768	5260	280	6750	5250	5	5 m below MLWST	-7.22	4.1
1	Gable Reef	Coral	SUA-1769	-4.32	SUA-1769	5490	240	6850	5650	5	5 m below MLWST	-7.22	2.9
1	Gable Reef	Coral	SUA-1770	-6.72	SUA-1770	6000	270	7450	6250	5	5 m below MLWST	-7.22	0.5
1	Gable Reef	Coral	SUA-1774	-4.12	SUA-1774	6130	260	7650	6350	5	5 m below MLWST	-7.22	3.1
1	Gable Reef	Coral	SUA-1775	-5.32	SUA-1775	6090	270	7550	6250	5	5 m below MLWST	-7.22	1.9
1	Gable Reef	Coral	SUA-1776	-6.22	SUA-1776	6100	260	7550	6350	5	5 m below MLWST	-7.22	1
1	Gable Reef	Coral	SUA-1777	-11.22	SUA-1777	6640	280	8150	6750	5	5 m below MLWST	-7.22	-4
1	Gable Reef	Coral	SUA-1778	-3.07	SUA-1778	3410	270	4450	2950	5	5 m below MLWST	-7.22	4.15
1	Gable Reef	Coral	SUA-1779	-14.87	SUA-1779	5740	230	7250	5950	5	5 m below MLWST	-7.22	-7.65
1	Gable Reef	Coral	SUA-1780	-15.82	SUA-1780	5830	230	7250	6150	5	5 m below MLWST	-7.22	-8.6
2	Lady Elliott Reef	Coral microatoll	SUA-865	-1.72	SUA-865	5300	85	6280	5910	0.05	MLWST	-2.22	0.5

Table notes:

Index points have ages in conventional radiocarbon and calibrated ages before present (2 sigma). Calibration uses the Oxcal program, version 3.10 (Bronk Ramsey, 1995; Hughen *et al.*, 2004). All calibrations use the southern hemisphere calibration curve (Stuiver *et al.*, 1998) but are not corrected for the marine reservoir effect.

MSL refers to the reconstructed elevation of the index point with respect to present day Mean Sea Level.

IR is the Indicative Range of an indicator (in metres).

Table entries highlighted in yellow refer to index points which only give information on the limits of sea-level at that time.

Author reference numbers refer to: 1.) (Hopley, 1983) 2.) (Flood, 1983) 3.) (Johnson and Carter, 1987) 4.) (Larcombe *et al.*, 1995) 5.) (Mclean *et al.*, 1978) 6.) (Chappell *et al.*, 1983) 7.) (Chappell *et al.*, 1982) 8.) (Crowley *et al.*, 1990) 9.) (Gagan, 1990) 10.) Carter, unpublished data 11.) (Grindrod and Rhodes, 1984) 12.) (Bloom, 1980) 13.) (Pye and Rhodes, 1985) 14.) Carter, unpublished data.